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THE

ETHICS OF THE DUST

Ten Lectures

TO

LITTLE HOUSEWIVES

ON

THE ELEMENTS OF CRYSTALLISATION

BY

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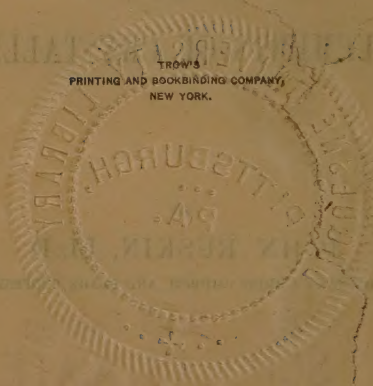
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Dedication

TO

THE REAL LITTLE HOUSEWIVES

WHOSE GENTLE LISTENING

AND THOUGHTFUL QUESTIONING

ENABLED THE WRITER TO WRITE THIS BOOK

IT IS DEDICATED

WITH HIS LOVE

Christmas, 1875

JAN 8 '78

1130

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PERSONÆ.

OLD LECTURER (of incalculable age)		
FLORRIE, on astronomical evidence presumed to be aged 9.		
ISABEL	"	11.
MAY	"	11.
LILY	"	12.
KATHLEEN	"	14.
LUCILLA	"	15.
VIOLET	"	16.
DORA (who has the keys and is housekeeper)	"	17.
EGYPT (so called from her dark eyes)	"	17.
JESSIE (who somehow always makes the room look brighter when she is in it)	"	18.
MARY (of whom everybody, including the Old Lec- turer, is in great awe)	"	20.

PREFACE TO THE SECOND EDITION. .

I HAVE seldom been more disappointed by the result of my best pains given to any of my books, than by the earnest request of my publisher, after the opinion of the public had been taken on the 'Ethics of the Dust,' that I would "write no more in dialogue!" However, I bowed to public judgment in this matter at once, (knowing also my inventive powers to be of the feeblest,) ; but in reprinting the book, (at the prevailing request of my kind friend, Mr. Henry Willett,) I would pray the readers whom it may at first offend by its disconnected method, to examine, nevertheless, with care, the passages in which the principal speaker sums the conclusions of any dialogue: for these summaries were written as introductions, for young people, to all that I have said on the same matters in my larger books; and, on re-reading them, they satisfy me better, and seem to me calculated to be more generally useful, than anything else I have done of the kind.

The summary of the contents of the whole book, beginning, "You may at least earnestly believe," at p. 130, is thus the clearest exposition I have ever yet given of the general conditions under which the Personal Creative Power manifests itself in the forms of matter; and the analysis of heathen conceptions of Deity, beginning at p. 131, and closing at p. 138, not only prefaces, but very nearly supersedes, all that in more lengthy terms I have since asserted, or pleaded for, in 'Arastra Pentelici,' and the 'Queen of the Air.'

And thus, however the book may fail in its intention of suggesting new occupations or interests to its younger readers, I think it worth reprinting, in the way I have also reprinted ‘Unto this Last,’—page for page; that the students of my more advanced works may be able to refer to these as the original documents of them; of which the most essential in this book are these following.

I. The explanation of the baseness of the avaricious functions of the Lower Pthah, p. 39, with his beetle-gospel, p. 41, “that a nation can stand on its vices better than on its virtues,” explains the main motive of all my books on Political Economy.

II. The examination of the connexion between stupidity and crime, pp. 57–62, anticipated all that I have had to urge in *Fors Clavigera* against the commonly alleged excuse for public wickedness,—“They don’t mean it—they don’t know any better.”

III. The examination of the roots of Moral Power, pp. 90–92, is a summary of what is afterwards developed with utmost care in my inaugural lecture at Oxford on the relation of Art to Morals; compare in that lecture, §§ 83–85, with the sentence in p. 91 of this book, “Nothing is ever done so as really to please our Father, unless we would also have done it, though we had had no Father to know of it.”

This sentence, however, it must be observed, regards only the general conditions of action in the children of God, in consequence of which it is foretold of them by Christ that they will say at the Judgment, “When saw we thee?” It does not refer to the distinct cases in which virtue consists in faith given to command, appearing to foolish human judgment inconsistent with the Moral Law, as in the sacrifice of Isaac; nor to those in which any directly-given command requires nothing more of virtue than obedience.

IV. The subsequent pages, 92-97, were written especially to check the dangerous impulses natural to the minds of many amiable young women, in the direction of narrow and selfish religious sentiment: and they contain, therefore, nearly everything which I believe it necessary that young people should be made to observe, respecting the errors of monastic life. But they in nowise enter on the reverse, or favourable side: of which indeed I did not, and as yet do not, feel myself able to speak with any decisiveness; the evidence on that side, as stated in the text, having "never yet been dispassionately examined."

V. The dialogue with Lucilla, beginning at p. 63, is, to my own fancy, the best bit of conversation in the book, and the issue of it, at p. 67, the most practically and immediately useful. For on the idea of the inevitable weakness and corruption of human nature, has logically followed, in our daily life, the horrible creed of modern "Social science," that all social action must be scientifically founded on vicious impulses. But on the habit of measuring and reverencing our powers and talents that we may kindly use them, will be founded a true Social science, developing, by the employment of them, all the real powers and honourable feelings of the race.

VI. Finally, the account given in the second and third lectures, of the real nature and marvellousness of the laws of crystallization, is necessary to the understanding of what farther teaching of the beauty of inorganic form I may be able to give, either in 'Deucalion,' or in my 'Elements of Drawing.' I wish however that the second lecture had been made the beginning of the book; and would fain now cancel the first altogether, which I perceive to be both obscure and dull. It was meant for a metaphorical description of the pleasures and dangers in the kingdom of Mammon, or of

worldly wealth ; its waters mixed with blood, its fruits entangled in thickets of trouble, and poisonous when gathered ; and the final captivity of its inhabitants within frozen walls of cruelty and disdain. But the imagery is stupid and ineffective throughout ; and I retain this chapter only because I am resolved to leave no room for any one to say that I have withdrawn, as erroneous in principle, so much as a single sentence of any of my books written since 1860.

One license taken in this book, however, though often permitted to essay-writers for the relief of their dulness, I never mean to take more,—the relation of composed metaphor as of actual dream, pp. 23 and 104. I assumed, it is true, that in these places the supposed dream would be easily seen to be an invention ; but must not any more, even under so transparent disguise, pretend to any share in the real powers of Vision possessed by great poets and true painters.

BRANTWOOD:

10th October, 1877.

PREFACE.

THE following lectures were really given, in substance, at a girls' school (far in the country); which in the course of various experiments on the possibility of introducing some better practice of drawing into the modern scheme of female education, I visited frequently enough to enable the children to regard me as a friend. The lectures always fell more or less into the form of fragmentary answers to questions; and they are allowed to retain that form, as, on the whole, likely to be more interesting than the symmetries of a continuous treatise. Many children (for the school was large) took part, at different times, in the conversations; but I have endeavoured, without confusedly multiplying the number of imaginary * speakers, to represent, as far as I could, the general tone of comment and enquiry among young people.

It will be at once seen that these Lectures were not intended for an introduction to mineralogy. Their purpose was merely to awaken in the minds of young girls, who were ready to work earnestly and systematically, a vital interest in the subject of their study. No science can be learned in play; but it is often possible, in play, to bring good fruit out of past labour, or show sufficient reasons for the labour of the future.

* I do not mean, in saying 'imaginary,' that I have not permitted to myself, in several instances, the affectionate discourtesy of some reminiscence of personal character; for which I must hope to be forgiven by my old pupils and their friends, as I could not otherwise have written the book at all. But only two sentences in all the dialogues, and the anecdote of 'Dotty,' are literally 'historical.'

The narrowness of this aim does not, indeed, justify the absence of all reference to many important principles of structure, and many of the most interesting orders of minerals ; but I felt it impossible to go far into detail without illustrations ; and if readers find this book useful, I may, perhaps, endeavour to supplement it by illustrated notes of the more interesting phenomena in separate groups of familiar minerals ;—flints of the chalk ;—agate of the basalts ;—and the fantastic and exquisitely beautiful varieties of the vein-ores of the two commonest metals, lead and iron. But I have always found that the less we speak of our intentions, the more chance there is of our realizing them ; and this poor little book will sufficiently have done its work, for the present, if it engages any of its young readers in study which may enable them to despise it for its shortcomings.

DENMARK HILL :

Christmas, 1865.

West College
SCHOLASTICATE,
Pittsburgh, Pa.

THE ETHICS OF THE DUST.

LECTURE I.

THE VALLEY OF DIAMONDS.

A very idle talk, by the dining-room fire, after raisin-and-almond time.

OLD LECTURER ; FLORRIE, ISABEL, MAY, LILY, and SIBYL.

OLD LECTURER (L.). Come here, Isabel, and tell me what the make-believe was, this afternoon.

ISABEL (*arranging herself very primly on the foot-stool*). Such a dreadful one! Florrie and I were lost in the Valley of Diamonds.

L. What! Sindbad's, which nobody could get out of?

ISABEL. Yes; but Florrie and I got out of it.

L. So I see. At least, I see you did; but are you sure Florrie did?

ISABEL. Quite sure.

FLORRIE (*putting her head round from behind L.'s sofa-cushion*). Quite sure. (*Disappears again.*)

L. I think I could be made to feel surer about it.

(FLORRIE *reappears, gives L. a kiss, and again exits.*)

L. I suppose it's all right; but how did you manage it?

ISABEL. Well, you know, the eagle that took up Sindbad was very large—very, very large—the largest of all the eagles.

L. How large were the others?

ISABEL. I don't quite know—they were so far off. But this one was, oh, so big! and it had great wings, as wide as—twice over the ceiling. So, when it was picking up Sindbad, Florrie and I thought it wouldn't know if we got on its back too: so I got up first, and then I pulled up Florrie, and we put our arms round its neck, and away it flew.

L. But why did you want to get out of the valley? and why haven't you brought me some diamonds?

ISABEL. It was because of the serpents. I couldn't pick up even the least little bit of a diamond, I was so frightened.

L. You should not have minded the serpents.

ISABEL. Oh, but suppose that they had minded me?

L. We all of us mind you a little too much, Isabel, I'm afraid.

ISABEL. No—no—no, indeed.

L. I tell you what, Isabel—I don't believe either Sindbad, or Florrie, or you, ever were in the Valley of Diamonds.

ISABEL. You naughty! when I tell you we were!

L. Because you say you were frightened at the serpents.

ISABEL. And wouldn't you have been?

L. Not at those serpents. Nobody who really goes into the valley is ever frightened at them—they are so beautiful.

ISABEL (*suddenly serious*). But there's no real Valley of Diamonds, is there?

L. Yes, Isabel; very real indeed.

FLORRIE (*reappearing*). Oh, where? Tell me about it.

L. I cannot tell you a great deal about it; only I know it is very different from Sindbad's. In his valley, there was only a diamond lying here and there; but, in the real valley, there are diamonds covering the grass in showers every morning, instead of dew: and there are clusters of trees, which look like lilac trees; but, in spring, all their blossoms are of amethyst.

FLORRIE. But there can't be any serpents there, then?

L. Why not?

FLORRIE. Because they don't come into such beautiful places.

L. I never said it was a beautiful place.

FLORRIE. What! not with diamonds strewed about it like dew?

L. That's according to your fancy, Florrie. For myself, I like dew better.

ISABEL. Oh, but the dew won't stay; it all dries!

L. Yes; and it would be much nicer if the diamonds dried

too, for the people in the valley have to sweep them off the grass, in heaps, whenever they want to walk on it; and then the heaps glitter so, they hurt one's eyes.

FLORRIE. Now you're just playing, you know.

L. So are you, you know.

FLORRIE. Yes, but you mustn't play.

L. That's very hard, Florrie; why mustn't I, if you may?

FLORRIE. Oh, I may, because I'm little, but you mustn't, because you're—(*hesitates for a delicate expression of magnitude*).

L. (*rudely taking the first that comes*). Because I'm big? No; that's not the way of it at all, Florrie. Because you're little, you should have very little play; and because I'm big I should have a great deal.

ISABEL and FLORRIE (*both*). No—no—no—no. That isn't it at all. (ISABEL *sola*, quoting Miss Ingelow.) 'The lambs play always—they know no better.' (*Putting her head very much on one side.*) Ah, now—please—please—tell us true; we want to know.

L. But why do you want me to tell you true, any more than the man who wrote the 'Arabian Nights?'

ISABEL. Because—because we like to know about real things; and you can tell us, and we can't ask the man who wrote the stories.

L. What do you call real things?

ISABEL. Now, you know! Things that really are.

L. Whether you can see them or not?

ISABEL. Yes, if somebody else saw them.

L. But if nobody has ever seen them?

ISABEL (*evading the point*). Well, but, you know, if there were a real Valley of Diamonds, somebody *must* have seen it.

L. You cannot be so sure of that, Isabel. Many people go to real places, and never see them; and many people pass through this valley, and never see it.

FLORRIE. What stupid people they must be!

L. No, Florrie. They are much wiser than the people who do see it.

MAY. I think I know where it is.

ISABEL. Tell us more about it, and then we'll guess.

L. Well. There's a great broad road, by a river-side, leading up into it.

MAY (*gravely cunning, with emphasis on the last word*). Does the road really go up?

L. You think it should go down into a valley? No, it goes up; this is a valley among the hills, and it is as high as the clouds, and is often full of them; so that even the people who most want to see it, cannot, always.

ISABEL. And what is the river beside the road like?

L. It ought to be very beautiful, because it flows over diamond sand—only the water is thick and red.

ISABEL. Red water?

L. It isn't all water.

MAY. Oh, please never mind that, Isabel, just now; I want to hear about the valley.

L. So the entrance to it is very wide, under a steep rock; only such numbers of people are always trying to get in, that they keep jostling each other, and manage it but slowly. Some weak ones are pushed back, and never get in at all; and make great moaning as they go away: but perhaps they are none the worse in the end.

MAY. And when one gets in, what is it like?

L. It is up and down, broken kind of ground: the road stops directly; and there are great dark rocks, covered all over with wild gourds and wild vines; the gourds, if you cut them, are red, with black seeds, like water-melons, and look ever so nice; and the people of the place make a red pottage of them: but you must take care not to eat any if you ever want to leave the valley (though I believe putting plenty of meal in it makes it wholesome). Then the wild vines have clusters of the colour of amber; and the people of the country say they are the grape of Eshcol; and sweeter than honey. but, indeed, if anybody else tastes them, they are like gall. Then there are thickets of bramble, so thorny that they would be cut away directly, anywhere else; but here they are covered with little cinque-foiled blossoms of pure silver; and, for berries, they have clusters of rubies. Dark rubies, which you only see are red after gathering them. But you may

rancy what blackberry parties the children have! Only they get their frocks and hands sadly torn.

LILY. But rubies can't spot one's frocks as blackberries do?

L. No; but I'll tell you what spots them—the mulberries. There are great forests of them, all up the hills, covered with silkworms, some munching the leaves so loud that it is like mills at work; and some spinning. But the berries are the blackest you ever saw; and, wherever they fall, they stain a deep red; and nothing ever washes it out again. And it is their juice, soaking through the grass, which makes the river so red, because all its springs are in this wood. And the boughs of the trees are twisted, as if in pain, like old olive branches; and their leaves are dark. And it is in these forests that the serpents are; but nobody is afraid of them. They have fine crimson crests, and they are wreathed about the wild branches, one in every tree, nearly; and they are singing serpents, for the serpents are, in this forest, what birds are in ours.

FLORRIE. Oh, I don't want to go there at all, now.

L. You would like it very much indeed, Florrie, if you were there. The serpents would not bite you; the only fear would be of your turning into one!

FLORRIE. Oh, dear, but that's worse.

L. You wouldn't think so if you really were turned into one, Florrie; you would be very proud of your crest. And as long as you were yourself (not that you could get there if you remained quite the little Florrie you are now), you would like to hear the serpents sing. They hiss a little through it, like the cicadas in Italy; but they keep good time, and sing delightful melodies; and most of them have seven heads, with throats which each take a note of the octave; so that they can sing chords—it is very fine indeed. And the fireflies fly round the edge of the forests all the night long; you wade in fireflies, they make the fields look like a lake trembling with reflection of stars; but you must take care not to touch them, for they are not like Italian fireflies, but burn, like real sparks.

FLORRIE. I don't like it at all ; I'll never go there.

L. I hope not, Florrie ; or at least that you will get out again if you do. And it is very difficult to get out, for beyond these serpent forests there are great cliffs of dead gold, which form a labyrinth, winding always higher and higher, till the gold is all split asunder by wedges of ice ; and glaciers, welded, half of ice seven times frozen, and half of gold seven times frozen, hang down from them, and fall in thunder, cleaving into deadly splinters, like the Cretan arrowheads ; and into a mixed dust of snow and gold, ponderous, yet which the mountain whirlwinds are able to lift and drive in wreaths and pillars, hiding the paths with a burial cloud, fatal at once with wintry chill, and weight of golden ashes. So the wanderers in the labyrinth fall, one by one, and are buried there : —yet, over the drifted graves, those who are spared climb to the last, through coil on coil of the path ; —for at the end of it they see the king of the valley, sitting on his throne : and beside him (but it is only a false vision), spectra of creatures like themselves, set on thrones, from which they seem to look down on all the kingdoms of the world, and the glory of them. And on the canopy of his throne there is an inscription in fiery letters, which they strive to read, but cannot ; for it is written in words which are like the words of all languages, and yet are of none. Men say it is more like their own tongue to the English than it is to any other nation ; but the only record of it is by an Italian, who heard the King himself cry it as a war cry, 'Pape Satan, Pape Satan Aleppe.' *

SIBYL. But do they all perish there ? You said there was a way through the valley, and out of it.

L. Yes ; but few find it. If any of them keep to the grass paths, where the diamonds are swept aside ; and hold their hands over their eyes so as not to be dazzled, the grass paths lead forward gradually to a place where one sees a little opening in the golden rocks. You were at Chamouni last year, Sibyl ; did your guide chance to show you the pierced rock of the Aiguille du Midi ?

SIBYL. No, indeed, we only got up from Geneva on Monday

* Dante, *Inf.* 7. 1.

night; and it rained all Tuesday; and we had to be back at Geneva again, early on Wednesday morning.

L. Of course. That is the way to see a country in a Sibylline manner, by inner consciousness: but you might have seen the pierced rock in your drive up, or down, if the clouds broke: not that there is much to see in it; one of the crags of the aiguille-edge, on the southern slope of it, is struck sharply through, as by an awl, into a little eyelet hole; which you may see, seven thousand feet above the valley (as the clouds flit past behind it, or leave the sky), first white, and then dark blue. Well, there's just such an eyelet hole in one of the upper crags of the Diamond Valley; and, from a distance, you think that it is no bigger than the eye of a needle. But if you get up to it, they say you may drive a loaded camel through it, and that there are fine things on the other side, but I have never spoken with anybody who had been through.

SIBYL. I think we understand it now. We will try to write it down, and think of it.

L. Meantime, Florrie, though all that I have been telling you is very true, yet you must not think the sort of diamonds that people wear in rings and necklaces are found lying about on the grass. Would you like to see how they really are found?

FLORRIE. Oh, yes—yes.

L. Isabel—or Lily—run up to my room and fetch me the little box with a glass lid, out of the top drawer of the chest of drawers. (*Race between LILY and ISABEL.*)

(*Re-enter ISABEL with the box, very much out of breath. LILY behind.*)

L. Why, you never can beat Lily in a race on the stairs, can you, Isabel?

ISABEL (*panting*). Lily—beat me—ever so far—but she gave me—the box—to carry in.

L. Take off the lid, then; gently.

FLORRIE (*after peeping in, disappointed*). There's only a great ugly brown stone!

L. Not much more than that, certainly, Florrie, if people were wise. But look, it is not a single stone; but a knot of

pebbles fastened together by gravel ; and in the gravel, or compressed sand, if you look close, you will see grains of gold glittering everywhere, all through ; and then, do you see these two white beads, which shine, as if they had been covered with grease ?

FLOBBIE. May I touch them ?

L. Yes ; you will find they are not greasy, only very smooth. Well, those are the fatal jewels ; native here in their dust with gold, so that you may see, cradled here together, the two great enemies of mankind,—the strongest of all malignant physical powers that have tormented our race.

SIBYL. Is that really so ? I know they do great harm ; but do they not also do great good ?

L. My dear child, what good ? Was any woman, do you suppose, ever the better for possessing diamonds ? but how many have been made base, frivolous, and miserable by desiring them ? Was ever man the better for having coffers full of gold ? But who shall measure the guilt that is incurred to fill them ? Look into the history of any civilised nations ; analyse, with reference to this one cause of crime and misery, the lives and thoughts of their nobles, priests, merchants, and men of luxurious life. Every other temptation is at last concentrated into this ; pride, and lust, and envy, and anger all give up their strength to avarice. The sin of the whole world is essentially the sin of Judas. Men do not disbelieve their Christ ; but they sell Him.

SIBYL. But surely that is the fault of human nature ? it is not caused by the accident, as it were, of there being a pretty metal, like gold, to be found by digging. If people could not find that, would they not find something else, and quarrel for it instead ?

L. No. Wherever legislators have succeeded in excluding, for a time, jewels and precious metals from among national possessions, the national spirit has remained healthy. Covetousness is not natural to man—generosity is ; but covetousness must be excited by a special cause, as a given disease by a given miasma ; and the essential nature of a material for the excitement of covetousness is, that it shall be a beautiful thing

which can be retained *without a use*. The moment we can use our possessions to any good purpose ourselves, the instinct of communicating that use to others rises side by side with our power. If you can read a book rightly, you will want others to hear it ; if you can enjoy a picture rightly, you will want others to see it : learn how to manage a horse, a plough, or a ship, and you will desire to make your subordinates good horsemen, ploughmen, or sailors ; you will never be able to see the fine instrument you are master of, abused ; but, once fix your desire on anything useless, and all the purest pride and folly in your heart will mix with the desire, and make you at last wholly inhuman, a mere ugly lump of stomach and suckers, like a cuttle-fish.

SIBYL. But surely, these two beautiful things, gold and diamonds, must have been appointed to some good purpose ?

L. Quite conceivably so, my dear : as also earthquakes and pestilences ; but of such ultimate purposes we can have no sight. The practical, immediate office of the earthquake and pestilence is to slay us, like moths ; and, as moths, we shall be wise to live out of their way. So, the practical, immediate office of gold and diamonds is the multiplied destruction of souls (in whatever sense you have been taught to understand that phrase) ; and the paralysis of wholesome human effort and thought on the face of God's earth : and a wise nation will live out of the way of them. The money which the English habitually spend in cutting diamonds would, in ten years, if it were applied to cutting rocks instead, leave no dangerous reef nor difficult harbour round the whole island coast. Great Britain would be a diamond worth cutting, indeed, a true piece of regalia. (*Leaves this to their thoughts for a little while.*) Then, also, we poor mineralogists might sometimes have the chance of seeing a fine crystal of diamond unhacked by the jeweller.

SIBYL. Would it be more beautiful uncut ?

L. No ; but of infinite interest. We might even come to know something about the making of diamonds.

SIBYL. I thought the chemists could make them already ?

L. In very small black crystals, yes ; but no one knows how

they are formed where they are found ; or if indeed they are formed there at all. These, in my hand, look as if they had been swept down with the gravel and gold ; only we can trace the gravel and gold to their native rocks, but not the diamonds. Read the account given of the diamond in any good work on mineralogy ;—you will find nothing but lists of localities of gravel, or conglomerate rock (which is only an old indurated gravel). Some say it was once a vegetable gum ; but it may have been charred wood ; but what one would like to know is, mainly, why charcoal should make itself into diamonds in India, and only into black lead in Borrowdale.

SIBYL. Are they wholly the same, then ?

L. There is a little iron mixed with our black lead but nothing to hinder its crystallisation. Your pencils in fact are all pointed with formless diamond, though they would be n n n pencils to purpose, if it crystallised.

SIBYL. But what is crystallisation ?

L. A pleasant question, when one's half asleep, and it has been tea time these two hours. What thoughtless things girls are !

SIBYL. Yes, we are ; but we want to know, for all that.

L. My dear, it would take a week to tell you.

SIBYL. Well, take it, and tell us.

L. But nobody knows anything about it.

SIBYL. Then tell us something that nobody knows.

L. Get along with you, and tell Dora to make tea.

(The house rises ; but of course the LECTURER wanted to be forced to lecture again, and was.)

LECTURE II.

THE PYRAMID BUILDERS.

In the large Schoolroom, to which everybody has been summoned by ringing of the great bell.

L. So you have all actually come to hear about crystallisation ! I cannot conceive why, unless the little ones think that the discussion may involve some reference to sugar-candy.

(Symptoms of high displeasure among the younger members of council. ISABEL frowns severely at L., and shakes her head violently.)

My dear children, if you knew it, you are yourselves, at this moment, as you sit in your ranks, nothing, in the eye of a mineralogist, but a lovely group of rosy sugar-candy, arranged by atomic forces. And even admitting you to be something more, you have certainly been crystallising without knowing it. Did I not hear a great hurrying and whispering, ten minutes ago, when you were late in from the playground ; and thought you would not all be quietly seated by the time I was ready :—besides some discussion about places—something about ‘it’s not being fair that the little ones should always be nearest?’ Well, you were then all being crystallised. When you ran in from the garden, and against one another in the passages, you were in what mineralogists would call a state of solution, and gradual confluence ; when you got seated in those orderly rows, each in her proper place, you became crystalline. That is just what the atoms of a mineral do, if they can, whenever they get disordered : they get into order again as soon as may be.

I hope you feel inclined to interrupt me, and say, ‘But we know our places ; how do the atoms know theirs ? And some-

times we dispute about our places ; do the atoms—(and, besides, we don't like being compared to atoms at all)—never dispute about theirs?' Two wise questions these, if you had a mind to put them ! it was long before I asked them myself, of myself. And I will not call you atoms any more. May I call you—let me see—'primary molecules?' (*General dissent indicated in subdued but decisive murmurs.*) No ! not even, in familiar Saxon, 'dust?'

(*Pause, with expression on faces of sorrowful doubt; LILY gives voice to the general sentiment in a timid 'Please don't.'*)

No, children, I won't call you that ; and mind, as you grow up, that you do not get into an idle and wicked habit of calling yourselves that. You are something better than dust, and have other duties to do than ever dust can do ; and the bonds of affection you will enter into are better than merely 'getting into order.' But see to it, on the other hand, that you always behave at least as well as 'dust ;' remember, it is only on compulsion, and while it has no free permission to do as it likes, that *it* ever gets out of order ; but sometimes, with some of us, the compulsion has to be the other way—hasn't it? (*Remonstratory whispers, expressive of opinion that the LECTURER is becoming too personal.*) I'm not looking at anybody in particular—indeed I am not. Nay, if you blush so, Kathleen, how can one help looking? We'll go back to the atoms.

'How do they know their places?' you asked, or should have asked. Yes, and they have to do much more than know them: they have to find their way to them, and that quietly and at once, without running against each other.

We may, indeed, state it briefly thus :—Suppose you have to build a castle, with towers and roofs and buttresses, out of bricks of a given shape, and that these bricks are all lying in a huge heap at the bottom, in utter confusion, upset out of carts at random. You would have to draw a great many plans, and count all your bricks, and be sure you had enough for this and that tower, before you began, and then you

would have to lay your foundation, and add layer by layer, in order, slowly.

But how would you be astonished, in these melancholy days, when children don't read children's books, nor believe any more in fairies, if suddenly a real benevolent fairy, in a bright brick-red gown, were to rise in the midst of the red bricks, and to tap the heap of them with her wand, and say: 'Bricks, bricks, to your places!' and then you saw in an instant the whole heap rise in the air, like a swarm of red bees, and—you have been used to see bees make a honeycomb, and to think that strange enough, but now you would see the honeycomb make itself!—You want to ask something, Florrie, by the look of your eyes.

FLORRIE. Are they turned into real bees, with stings?

L. No, Florrie; you are only to fancy flying bricks, as you saw the slates flying from the roof the other day in the storm; only those slates didn't seem to know where they were going, and, besides, were going where they had no business: but my spell-bound bricks, though they have no wings, and what is worse, no heads and no eyes, yet find their way in the air just where they should settle, into towers and roofs, each flying to his place and fastening there at the right moment, so that every other one shall fit to him in his turn.

LILY. But who are the fairies, then, who build the crystals?

L. There is one great fairy, Lily, who builds much more than crystals; but she builds these also. I dreamed that I saw her building a pyramid, the other day, as she used to do, for the Pharaohs.

ISABEL. But that was only a dream?

L. Some dreams are truer than some wakings, Isabel; but I won't tell it you unless you like.

ISABEL. Oh, please, please.

L. You are all such wise children, there's no talking to you; you won't believe anything.

LILY. No, we are not wise, and we will believe anything, when you say we ought.

L. Well, it came about this way. Sibyl, do you recollect

that evening when we had been looking at your old cave by Cumæ, and wondering why you didn't live there still; and then we wondered how old you were; and Egypt said you wouldn't tell, and nobody else could tell but she; and you laughed—I thought very gaily for a Sibyl—and said you would harness a flock of cranes for us, and we might fly over to Egypt if we liked, and see.

SIBYL. Yes, and you went, and couldn't find out after all!

L. Why, you know, Egypt had been just doubling that third pyramid of hers;* and making a new entrance into it; and a fine entrance it was! First, we had to go through an ante-room, which had both its doors blocked up with stones; and then we had three granite portcullises to pull up, one after another; and the moment we had got under them, Egypt signed to somebody above; and down they came again behind us, with a roar like thunder, only louder; then we got into a passage fit for nobody but rats, and Egypt wouldn't go any further herself, but said we might go on if we liked; and so we came to a hole in the pavement, and then to a granite trap-door—and then we thought we had gone quite far enough, and came back, and Egypt laughed at us.

EGYPT. You would not have had me take my crown off, and stoop all the way down a passage fit only for rats?

L. It was not the crown, Egypt—you know that very well. It was the flounces that would not let you go any farther. I suppose, however, you wear them as typical of the inundation of the Nile, so it is all right.

ISABEL. Why didn't you take me with you? Where rats can go, mice can. I wouldn't have come back.

L. No, mousie; you would have gone on by yourself, and you might have waked one of Pasht's cats,† and it would have eaten you. I was very glad you were not there. But after all this, I suppose the imagination of the heavy granite blocks and the underground ways had troubled me, and dreams are often shaped in a strange opposition to the impressions that have caused them; and from all that we had

* Note i.

† Note iii.

been reading in Bunsen about stones that couldn't be lifted with levers, I began to dream about stones that lifted themselves with wings.

SIBYL. Now you must just tell us all about it.

L. I dreamed that I was standing beside the lake, out of whose clay the bricks were made for the great pyramid of Asychis.* They had just been all finished, and were lying by the lake margin, in long ridges, like waves. It was near evening; and as I looked towards the sunset, I saw a thing like a dark pillar standing where the rock of the desert stoops to the Nile valley. I did not know there was a pillar there, and wondered at it; and it grew larger, and glided nearer, becoming like the form of a man, but vast, and it did not move its feet, but glided like a pillar of sand. And as it drew nearer, I looked by chance past it, towards the sun; and saw a silver cloud, which was of all the clouds closest to the sun (and in one place crossed it), draw itself back from the sun, suddenly. And it turned, and shot towards the dark pillar; leaping in an arch, like an arrow out of a bow. And I thought it was lightning; but when it came near the shadowy pillar, it sank slowly down beside it, and changed into the shape of a woman, very beautiful, and with a strength of deep calm in her blue eyes. She was robed to the feet with a white robe; and above that, to her knees, by the cloud which I had seen across the sun; but all the golden ripples of it had become plumes, so that it had changed into two bright wings like those of a vulture, which wrapped round her to her knees. She had a weaver's shuttle hanging over her shoulder, by the thread of it, and in her left hand, arrows, tipped with fire.

ISABEL (*clapping her hands*). Oh! it was Neith, it was Neith! I know now.

L. Yes; it was Neith herself; and as the two great spirits came nearer to me, I saw they were the Brother and Sister—the pillared shadow was the Greater Pthah.† And I heard them speak, and the sound of their words was like a distant singing. I could not understand the words one by one; yet

* Note ii.

† Note iii.

their sense came to me ; and so I knew that Neith had come down to see her brother's work, and the work that he had put into the mind of the king to make his servants do. And she was displeased at it ; because she saw only pieces of dark clay ; and no porphyry, nor marble, nor any fair stone that men might engrave the figures of the gods upon. And she blamed her brother, and said, 'Oh, Lord of truth ! is this then thy will, that men should mould only four-square pieces of clay : and the forms of the gods no more ?' Then the Lord of truth sighed, and said, 'Oh ! sister, in truth they do not love us ; why should they set up our images ? Let them do what they may, and not lie—let them make their clay four-square ; and labour ; and perish.'

Then Neith's dark blue eyes grew darker, and she said, 'Oh, Lord of truth ! why should they love us ? their love is vain ; or fear us ? for their fear is base. Yet let them testify of us, that they knew we lived for ever.'

But the Lord of truth answered, 'They know, and yet they know not. Let them keep silence ; for their silence only is truth.'

But Neith answered, 'Brother, wilt thou also make league with Death, because Death is true ? Oh ! thou potter, who hast cast these human things from thy wheel, many to dishonour, and few to honour ; wilt thou not let them so much as see my face ; but slay them in slavery ?'

But Pthah only answered, 'Let them build, sister, let them build.'

And Neith answered, 'What shall they build, if I build not with them ?'

And Pthah drew with his measuring rod upon the sand. And I saw suddenly, drawn on the sand, the outlines of great cities, and of vaults, and domes, and aqueducts, and bastions, and towers, greater than obelisks, covered with black clouds. And the wind blew ripples of sand amidst the lines that Pthah drew, and the moving sand was like the marching of men. But I saw that wherever Neith looked at the lines, they faded, and were effaced.

'Oh, Brother !' she said at last, 'what is this vanity ? If I,

who am Lady of wisdom, do not mock the children of men, why shouldst thou mock them, who art Lord of truth?' But Pthah answered, 'They thought to bind me; and they shall be bound. They shall labour in the fire for vanity.'

And Neith said, looking at the sand, 'Brother, there is no true labour here—there is only weary life and wasteful death.'

And Pthah answered, 'Is it not truer labour, sister, than thy sculpture of dreams?'

Then Neith smiled; and stopped suddenly.

She looked to the sun; its edge touched the horizon-edge of the desert. Then she looked to the long heaps of pieces of clay, that lay, each with its blue shadow, by the lake shore.

'Brother,' she said, 'how long will this pyramid of thine be in building?'

'Thoth will have sealed the scroll of the years ten times, before the summit is laid.'

'Brother, thou knowest not how to teach thy children to labour,' answered Neith. 'Look! I must follow Phre beyond Atlas; shall I build your pyramid for you before he goes down?' And Pthah answered, 'Yea, sister, if thou canst put thy winged shoulders to such work.' And Neith drew herself to her height; and I heard a clashing pass through the plumes of her wings, and the asp stood up on her helmet, and fire gathered in her eyes. And she took one of the flaming arrows out of the sheaf in her left hand, and stretched it out over the heaps of clay. And they rose up like flights of locusts, and spread themselves in the air, so that it grew dark in a moment. Then Neith designed them places with her arrow point; and they drew into ranks, like dark clouds laid level at morning. Then Neith pointed with her arrow to the north, and to the south, and to the east, and to the west, and the flying motes of earth drew asunder into four great ranked crowds; and stood, one in the north, and one in the south, and one in the east, and one in the west—one against another. Then Neith spread her wings wide for an instant, and closed them with a sound like the sound of

a rushing sea ; and waved her hand towards the foundation of the pyramid, where it was laid on the brow of the desert. And the four flocks drew together and sank down, like sea-birds settling to a level rock ; and when they met, there was a sudden flame, as broad as the pyramid, and as high as the clouds ; and it dazzled me ; and I closed my eyes for an instant ; and when I looked again, the pyramid stood on its rock, perfect ; and purple with the light from the edge of the sinking sun.

THE YOUNGER CHILDREN (*variously pleased*). I'm so glad ! How nice ! But what did Pthah say ?

L. Neith did not wait to hear what he would say. When I turned back to look at her, she was gone ; and I only saw the level white cloud form itself again, close to the arch of the sun as it sank. And as the last edge of the sun disappeared, the form of Pthah faded into a mighty shadow, and so passed away.

EGYPT. And was Neith's pyramid left ?

L. Yes ; but you could not think, Egypt, what a strange feeling of utter loneliness came over me when the presence of the two gods passed away. It seemed as if I had never known what it was to be alone before ; and the unbroken line of the desert was terrible.

EGYPT. I used to feel that, when I was queen : sometimes I had to carve gods, for company, all over my palace. I would fain have seen real ones, if I could.

L. But listen a moment yet, for that was not quite all my dream. The twilight drew swiftly to the dark, and I could hardly see the great pyramid ; when there came a heavy murmuring sound in the air ; and a horned beetle, with terrible claws, fell on the sand at my feet, with a blow like the beat of a hammer. Then it stood up on its hind claws, and waved its pincers at me : and its fore claws became strong arms, and hands ; one grasping real iron pincers, and the other a huge hammer ; and it had a helmet on its head, without any eyelet holes, that I could see. And its two hind claws became strong crooked legs, with feet bent inwards. And so there stood by me a dwarf, in glossy black armour,

ribbed and embossed like a beetle's back, leaning on his hammer. And I could not speak for wonder; but he spoke with a murmur like the dying away of a beat upon a bell. He said, 'I will make Neith's great pyramid small. I am the lower Pthah; and have power over fire. I can wither the strong things, and strengthen the weak; and everything that is great I can make small, and everything that is little I can make great.' Then he turned to the angle of the pyramid and limped towards it. And the pyramid grew deep purple; and then red like blood, and then pale rose-colour, like fire. And I saw that it glowed with fire from within. And the lower Pthah touched it with the hand that held the pincers; and it sank down like the sand in an hour-glass,—then drew itself together, and sank, still, and became nothing, it seemed to me; but the armed dwarf stooped down, and took it into his hand, and brought it to me, saying, 'Everything that is great I can make like this pyramid; and give into men's hands to destroy.' And I saw that he had a little pyramid in his hand, with as many courses in it as the large one; and built like that, only so small. And because it glowed still, I was afraid to touch it; but Pthah said, 'Touch it—for I have bound the fire within it, so that it cannot burn.' So I touched it, and took it into my own hand; and it was cold; only red, like a ruby. And Pthah laughed, and became like a beetle again, and buried himself in the sand, fiercely; throwing it back over his shoulders. And it seemed to me as if he would draw me down with him into the sand; and I started back, and woke, holding the little pyramid so fast in my hand that it hurt me.

EGYPT. Holding WHAT in your hand?

L. The little pyramid.

EGYPT. Neith's pyramid?

L. Neith's, I believe; though not built for Asychis. I know only that it is a little rosy transparent pyramid, built of more courses of bricks than I can count, it being made so small. You don't believe me, of course, Egyptian infidel; but there it is. (*Giving crystal of rose Fluor.*)

(Confused examination by crowded audience, over each other's shoulders and under each other's arms. Disappointment begins to manifest itself.)

SIBYL *(not quite knowing why she and others are disappointed)*.
But you showed us this the other day !

L. Yes ; but you would not look at it the other day.

SIBYL. But was all that fine dream only about this ?

L. What finer thing could a dream be about than this ? It is small, if you will ; but when you begin to think of things rightly, the ideas of smallness and largeness pass away. The making of this pyramid was in reality just as wonderful as the dream I have been telling you, and just as incomprehensible. It was not, I suppose, as swift, but quite as grand things are done as swiftly. When Neith makes crystals of snow, it needs a great deal more marshalling of the atoms, by her flaming arrows, than it does to make crystals like this one ; and that is done in a moment.

EGYPT. But how you *do* puzzle us ! Why do you say Neith does it ? You don't mean that she is a real spirit, do you ?

L. What *I* mean, is of little consequence. What the Egyptians meant, who called her 'Neith,'—or Homer, who called her 'Athena,'—or Solomon, who called her by a word which the Greeks render as 'Sophia,' you must judge for yourselves. But her testimony is always the same, and all nations have received it : 'I was by Him as one brought up with Him, and I was daily His delight ; rejoicing in the habitable parts of the earth, and my delights were with the sons of men.'

MARY. But is not that only a personification ?

L. If it be, what will you gain by unpersonifying it, or what right have you to do so ? Cannot you accept the image given you, in its life ; and listen, like children, to the words which chiefly belong to you as children : 'I love them that love me, and those that seek me early shall find me ?'

(They are all quiet for a minute or two ; questions begin to appear in their eyes.)

I cannot talk to you any more to-day. Take that rose-crystal away with you, and think.

LECTURE III.

THE CRYSTAL LIFE.

A very dull Lecture, wilfully brought upon themselves by the elder children. Some of the young ones have, however, managed to get in by mistake.
SCENE, the Schoolroom.

L. So I am to stand up here merely to be asked questions, to-day, Miss Mary, am I?

MARY. Yes; and you must answer them plainly; without telling us any more stories. You are quite spoiling the children: the poor little things' heads are turning round like kaleidoscopes; and they don't know in the least what you mean. Nor do we old ones, either, for that matter: to-day you must really tell us nothing but facts.

L. I am sworn; but you won't like it, a bit.

MARY. Now, first of all, what do you mean by 'bricks?'—Are the smallest particles of minerals all of some accurate shape, like bricks?

L. I do not know, Miss Mary; I do not even know if anybody knows. The smallest atoms which are visibly and practically put together to make large crystals, may better be described as 'limited in fixed directions' than as 'of fixed forms.' But I can tell you nothing clear about ultimate atoms: you will find the idea of little bricks, or, perhaps, of little spheres, available for all the uses you will have to put it to.

MARY. Well, it's very provoking; one seems always to be stopped just when one is coming to the very thing one wants to know.

L. No, Mary, for we should not wish to know anything but what is easily and assuredly knowable. There's no end to it. If I could show you, or myself, a group of ultimate atoms,

quite clearly, in this magnifying glass, we should both be presently vexed because we could not break them in two pieces, and see their insides.

MARY. Well then, next, what do you mean by the flying of the bricks? What is it the atoms do, that is like flying?

L. When they are dissolved, or uncrystallised, they are really separated from each other, like a swarm of gnats in the air, or like a shoal of fish in the sea;—generally at about equal distances. In currents of solutions, or at different depths of them, one part may be more full of the dissolved atoms than another; but on the whole, you may think of them as equidistant, like the spots in the print of your gown. If they are separated by force of heat only, the substance is said to be melted; if they are separated by any other substance, as particles of sugar by water, they are said to be ‘dissolved.’ Note this distinction carefully, all of you.

DORA. I will be very particular. When next you tell me there isn’t sugar enough in your tea, I will say, ‘It is not yet dissolved, sir.’

L. I tell you what shall be dissolved, Miss Dora; and that’s the present parliament, if the members get too saucy.

(DORA folds her hands and casts down her eyes.)

L. (*proceeds in state*). Now, Miss Mary, you know already, I believe, that nearly everything will melt, under a sufficient heat, like wax. Limestone melts (under pressure); sand melts; granite melts; the lava of a volcano is a mixed mass of many kinds of rocks, melted: and any melted substance nearly always, if not always, crystallises as it cools; the more slowly the more perfectly. Water melts at what we call the freezing, but might just as wisely, though not as conveniently, call the melting, point; and radiates as it cools into the most beautiful of all known crystals. Glass melts at a greater heat, and will crystallise, if you let it cool slowly enough, in stars, much like snow. Gold needs more heat to melt it, but crystallises also exquisitely, as I will presently show you. Arsenic and sulphur crystallise from their vapours. Now in any of these cases, either of melted, dissolved, or vaporous bodies,

the particles are usually separated from each other, either by heat, or by an intermediate substance; and in crystallising they are both brought nearer to each other, and packed, so as to fit as closely as possible: the essential part of the business being not the bringing together, but the packing. Who packed your trunk for you, last holidays, Isabel?

ISABEL. Lily does, always.

L. And how much can you allow for Lily's good packing, in guessing what will go into the trunk?

ISABEL. Oh! I bring twice as much as the trunk holds. Lily always gets everything in.

LILY. Ah! but, Isey, if you only knew what a time it takes! and since you've had those great hard buttons on your frocks, I can't do anything with them. Buttons won't go anywhere, you know.

L. Yes, Lily, it would be well if she only knew what a time it takes; and I wish any of us knew what a time crystallisation takes, for that is consummately fine packing. The particles of the rock are thrown down, just as Isabel brings her things—in a heap; and innumerable Lilies, not of the valley, but of the rock, come to pack them. But it takes such a time!

However, the best—out and out the best—way of understanding the thing, is to crystallise yourselves.

THE AUDIENCE. Ourselves!

L. Yes; not merely as you did the other day, carelessly, on the schoolroom forms; but carefully and finely, out in the playground. You can play at crystallisation there as much as you please.

KATHLEEN and JESSIE. Oh! how?—how?

L. First, you must put yourselves together, as close as you can, in the middle of the grass, and form, for first practice, any figure you like.

JESSIE. Any dancing figure, do you mean?

L. No; I mean a square, or a cross, or a diamond. Any figure you like, standing close together. You had better outline it first on the turf, with sticks, or pebbles, so as to see that it is rightly drawn; then get into it and enlarge or dimin-

ish it at one side, till you are all quite in it, and no empty space left.

DORA. Crinoline and all?

L. The crinoline may stand eventually for rough crystalline surface, unless you pin it in; and then you may make a polished crystal of yourselves.

LILY. Oh, we'll pin it in—we'll pin it in!

L. Then, when you are all in the figure, let every one note her place, and who is next her on each side; and let the outsiders count how many places they stand from the corners.

KATHLEEN. Yes, yes,—and then?

L. Then you must scatter all over the playground—right over it from side to side, and end to end; and put yourselves all at equal distances from each other, everywhere. You needn't mind doing it very accurately, but so as to be nearly equidistant; not less than about three yards apart from each other, on every side.

JESSIE. We can easily cut pieces of string of equal length, to hold. And then?

L. Then, at a given signal, let everybody walk, at the same rate, towards the outlined figure in the middle. You had better sing as you walk; that will keep you in good time. And as you close in towards it, let each take her place, and the next comers fit themselves in beside the first ones, till you are all in the figure again.

KATHLEEN. Oh! how we shall run against each other! What fun it will be!

L. No, no, Miss Katie; I can't allow any running against each other. The atoms never do that, whatever human creatures do. You must all know your places, and find your way to them without jostling.

LILY. But how ever shall we do that?

ISABEL. Mustn't the ones in the middle be the nearest, and the outside ones farther off—when we go away to scatter, I mean?

L. Yes; you must be very careful to keep your order; you will soon find out how to do it; it is only like soldiers forming square, except that each must stand still in her place

as she reaches it, and the others come round her; and you will have much more complicated figures, afterwards, to form, than squares.

ISABEL. I'll put a stone at my place: then I shall know it.

L. You might each nail a bit of paper to the turf, at your place, with your name upon it: but it would be of no use, for if you don't know your places, you will make a fine piece of business of it, while you are looking for your names. And, Isabel, if with a little head, and eyes, and a brain (all of them very good and serviceable of their kind, as such things go), you think you cannot know your place without a stone at it, after examining it well,—how do you think each atom knows its place, when it never was there before, and there's no stone at it?

ISABEL. But does every atom know its place?

L. How else could it get there?

MARY. Are they not attracted to their places?

L. Cover a piece of paper with spots, at equal intervals; and then imagine any kind of attraction you choose, or any law of attraction, to exist between the spots, and try how, on that permitted supposition, you can attract them into the figure of a Maltese cross, in the middle of the paper.

MARY (*having tried it*). Yes; I see that I cannot:—one would need all kinds of attractions, in different ways, at different places. But you do not mean that the atoms are alive?

L. What is it to be alive?

DORA. There now; you're going to be provoking, I know.

L. I do not see why it should be provoking to be asked what it is to be alive. Do you think you don't know whether you are alive or not?

(ISABEL *skips to the end of the room and back.*)

L. Yes, Isabel, that's all very fine; and you and I may call that being alive: but a modern philosopher calls it being in a 'mode of motion.' It requires a certain quantity of heat to take you to the sideboard; and exactly the same quantity to bring you back again. That's all.

ISABEL. No, it isn't. And besides, I'm not hot.

L. I am, sometimes, at the way they talk. However, you know, Isabel, you might have been a particle of a mineral, and yet have been carried round the room, or anywhere else, by chemical forces, in the liveliest way.

ISABEL. Yes ; but I wasn't carried : I carried myself.

L. The fact is, mousie, the difficulty is not so much to say what makes a thing alive, as what makes it a Self. As soon as you are shut off from the rest of the universe into a Self, you begin to be alive.

VIOLET (*indignant*). Oh, surely—surely that cannot be so. Is not all the life of the soul in communion, not separation ?

L. There can be no communion where there is no distinction. But we shall be in an abyss of metaphysics presently, if we don't look out ; and besides, we must not be too grand, to-day, for the younger children. We'll be grand, some day, by ourselves, if we must. (*The younger children are not pleased, and prepare to remonstrate ; but, knowing by experience, that all conversations in which the word 'communion' occurs, are unintelligible, think better of it.*) Meantime, for broad answer about the atoms. I do not think we should use the word 'life,' of any energy which does not belong to a given form. A seed, or an egg, or a young animal are properly called 'alive' with respect to the force belonging to those forms, which consistently develops that form, and no other. But the force which crystallises a mineral appears to be chiefly external, and it does not produce an entirely determinate and individual form, limited in size, but only an aggregation, in which some limiting laws must be observed.

MARY. But I do not see much difference, that way, between a crystal and a tree.

L. Add, then, that the mode of the energy in a living thing implies a continual change in its elements ; and a period for its end. So you may define life by its attached negative, death ; and still more by its attached positive, birth. But I won't be plagued any more about this, just now ; if you choose to think the crystals alive, do, and welcome. Rocks have always been called 'living' in their native place.

MARY. These's one question more ; then I've done.

L. Only one ?

MARY. Only one.

L. But if it is answered, won't it turn into two ?

MARY. No ; I think it will remain single, and be comfortable.

L. Let me hear it.

MARY. You know, we are to crystallise ourselves out of the whole playground. Now, what playground have the minerals ? Where are they scattered before they are crystallised ; and where are the crystals generally made ?

L. That sounds to me more like three questions than one, Mary. If it is only one, it is a wide one.

MARY. I did not say anything about the width of it.

L. Well, I must keep it within the best compass I can. When rocks either dry from a moist state, or cool from a heated state, they necessarily alter in bulk ; and cracks, or open spaces, form in them in all directions. These cracks must be filled up with solid matter, or the rock would eventually become a ruinous heap. So, sometimes by water, sometimes by vapour, sometimes nobody knows how, crystallisable matter is brought from somewhere, and fastens itself in these open spaces, so as to bind the rock together again, with crystal cement. A vast quantity of hollows are formed in lavas by bubbles of gas, just as the holes are left in bread well baked. In process of time these cavities are generally filled with various crystals.

MARY. But where does the crystallising substance come from ?

L. Sometimes out of the rock itself ; sometimes from below or above, through the veins. The entire substance of the contracting rock may be filled with liquid, pressed into it so as to fill every pore ;—or with mineral vapour ;—or it may be so charged at one place, and empty at another. There's no end to the 'may be's.' But all that you need fancy, for our present purpose, is that hollows in the rocks, like the caves in Derbyshire, are traversed by liquids or vapour containing certain elements in a more or less free or separate state, which crystallise on the cave walls.

SIBYL. There now ;—Mary has had all her questions answered : it's my turn to have mine.

L. Ah, there's a conspiracy among you, I see. I might have guessed as much.

DORA. I'm sure you ask us questions enough ! How can you have the heart, when you dislike so to be asked them yourself ?

L. My dear child, if people do not answer questions, it does not matter how many they are asked, because they've no trouble with them. Now, when I ask you questions, I never expect to be answered ; but when you ask me, you always do ; and it's not fair.

DORA. Very well, we shall understand, next time.

SIBYL. No, but seriously, we all want to ask one thing more, quite dreadfully.

L. And I don't want to be asked it, quite dreadfully ; but you'll have your own way, of course.

SIBYL. We none of us understand about the lower Pthah. It was not merely yesterday ; but in all we have read about him in Wilkinson, or in any book, we cannot understand what the Egyptians put their god into that ugly little deformed shape for.

L. Well, I'm glad it's that sort of question ; because I can answer anything I like, to that.

EGYPT. Anything you like will do quite well for us ; we shall be pleased with the answer, if you are.

L. I am not so sure of that, most gracious queen ; for I must begin by the statement that queens seem to have disliked all sorts of work, in those days, as much as some queens dislike sewing to-day.

EGYPT. Now, it's too bad ! and just when I was trying to say the civillest thing I could !

L. But, Egypt, why did you tell me you disliked sewing so ?

EGYPT. Did not I show you how the thread cuts my fingers ? and I always get cramp, somehow, in my neck, if I sew long.

L. Well, I suppose the Egyptian queens thought every

body got cramp in their neck, if they sewed long; and that thread always cut people's fingers. At all events, every kind of manual labour was despised both by them, and the Greeks; and, while they owned the real good and fruit of it, they yet held it a degradation to all who practised it. Also, knowing the laws of life thoroughly, they perceived that the special practice necessary to bring any manual art to perfection strengthened the body distortedly; one energy or member gaining at the expense of the rest. They especially dreaded and despised any kind of work that had to be done near fire: yet, feeling what they owed to it in metal-work, as the basis of all other work, they expressed this mixed reverence and scorn in the varied types of the lame Hephæstus, and the lower Pthah.

SIBYL. But what did you mean by making him say 'everything great I can make small, and everything small great?'

L. I had my own separate meaning in that. We have seen in modern times the power of the lower Pthah developed in a separate way, which no Greek nor Egyptian could have conceived. It is the character of pure and eyeless manual labour to conceive everything as subjected to it: and, in reality, to disgrace and diminish all that is so subjected; aggrandising itself, and the thought of itself, at the expense of all noble things. I heard an orator, and a good one too, at the Working Men's College, the other day, make a great point in a description of our railroads; saying, with grandly conducted emphasis, 'They have made man greater, and the world less.' His working audience were mightily pleased; they thought it so very fine a thing to be made bigger themselves; and all the rest of the world less. I should have enjoyed asking them (but it would have been a pity—they were so pleased), how much less they would like to have the world made;—and whether, at present, those of them really felt the biggest men, who lived in the least houses.

SIBYL. But then, why did you make Pthah say that he could make weak things strong, and small things great?

L. My dear, he is a boaster and self-assertor, by nature; but it is so far true. For instance, we used to have a fair

in our neighbourhood—a very fine fair we thought it. You never saw such an one ; but if you look at the engraving of Turner's 'St. Catherine's Hill,' you will see what it was like. There were curious booths, carried on poles; and peep-shows ; and music, with plenty of drums and cymbals ; and much barley-sugar and gingerbread, and the like : and in the alleys of this fair the London populace would enjoy themselves, after their fashion, very thoroughly. Well, the little Pthah set to work upon it one day ; he made the wooden poles into iron ones, and put them across, like his own crooked legs, so that you always fall over them if you don't look where you are going ; and he turned all the canvas into panes of glass, and put it up on his iron cross-poles ; and made all the little booths into one great booth ; and people said it was very fine, and a new style of architecture ; and Mr. Dickens said nothing was ever like it in Fairy-land, which was very true. And then the little Pthah set to work to put fine fairings in it ; and he painted the Nineveh bulls afresh, with the blackest eyes he could paint (because he had none himself), and he got the angels down from Lincoln choir, and gilded their wings like his gingerbread of old times ; and he sent for everything else he could think of, and put it in his booth. There are the casts of Niobe and her children ; and the Chimpanzee ; and the wooden Caffres and New-Zealanders ; and the Shakespeare House ; and Le Grand Blondin, and Le Petit Blondin ; and Handel ; and Mozart ; and no end of shops, and buns, and beer ; and all the little-Pthah-worshippers say, never was anything so sublime !

SIBYL. Now, do you mean to say you never go to these Crystal Palace concerts ? They're as good as good can be.

L. I don't go to the thundering things with a million of bad voices in them. When I want a song, I get Julia Manning and Lucy Bertram and Counsellor Pleydell to sing 'We be three poor Mariners' to me ; then I've no headache next morning. But I do go to the smaller concerts, when I can ; for they are very good, as you say, Sibyl : and I always get a reserved seat somewhere near the orchestra, where I am sure I can see the kettle-drummer drum.

SIBYL. Now *do* be serious, for one minute.

L. I am serious—never was more so. You know one can't see the modulation of violinists' fingers, but one can see the vibration of the drummer's hand ; and it's lovely.

SIBYL. But fancy going to a concert, not to hear, but to see !

L. Yes, it is very absurd. The quite right thing, I believe, is to go there to talk. I confess, however, that in most music, when very well done, the doing of it is to me the chiefly interesting part of the business. I'm always thinking how good it would be for the fat, supercilious people, who care so little for their half-crown's worth, to be set to try and do a half-crown's worth of anything like it.

MARY. But surely that Crystal Palace is a great good and help to the people of London ?

L. The fresh air of the Norwood hills is, or was, my dear ; but they are spoiling that with smoke as fast as they can. And the palace (as they call it) is a better place for them, by much, than the old fair ; and it is always there, instead of for three days only ; and it shuts up at proper hours of night. And good use may be made of the things in it, if you know how : but as for its teaching the people, it will teach them nothing but the lowest of the lower Pthah's work—nothing but hammer and tongs. I saw a wonderful piece, of his doing, in the place, only the other day. Some unhappy metal-worker—I am not sure if it was not a metal-working firm—had taken three years to make a Golden eagle.

SIBYL. Of real gold ?

L. No ; of bronze, or copper, or some of their foul patent metal—it is no matter what. I meant a model of our chief British eagle. Every feather was made separately ; and every filament of every feather separately, and so joined on ; and all the quills modelled of the right length and right section, and at last the whole cluster of them fastened together. You know, children, I don't think much of my own drawing ; but take my proud word for once, that when I go to the Zoological Gardens, and happen to have a bit of chalk in my pocket, and the Gray Harpy will sit, without screwing his

head round, for thirty seconds,—I can do a better thing of him in that time than the three years' work of this industrious firm. For, during the thirty seconds, the eagle is my object,—not myself ; and during the three years, the firm's object, in every fibre of bronze it made, was itself, and not the eagle. That is the true meaning of the little Pthah's having no eyes—he can see only himself. The Egyptian beetle was not quite the full type of him ; our northern ground beetle is a truer one. It is beautiful to see it at work, gathering its treasures (such as they are) into little round balls ; and pushing them home with the strong wrong end of it,—head downmost all the way,—like a modern political economist with his ball of capital, declaring that a nation can stand on its vices better than on its virtues. But away with you, children, now, for I'm getting cross.

DORA. I'm going down-stairs ; I shall take care, at any rate, that there are no little Pthahs in the kitchen cupboards.

LECTURE IV.

THE CRYSTAL ORDERS.

*A working Lecture, in the large School-room ; with experimental Interludes.
The great bell has rung unexpectedly.*

KATHLEEN (*entering disconsolate, though first at the summons*). Oh dear, oh dear, what a day ! Was ever anything so provoking ! just when we wanted to crystallise ourselves ;—and I'm sure it's going to rain all day long.

L. So am I, Kate. The sky has quite an Irish way with it. But I don't see why Irish girls should also look so dismal. Fancy that you don't want to crystallise yourselves : you didn't, the day before yesterday, and you were not unhappy when it rained then.

FLORRIE. Ah ! but we do want to-day ; and the rain's so tiresome.

L. That is to say, children, that because you are all the richer by the expectation of playing at a new game, you choose to make yourselves unhappier than when you had nothing to look forward to, but the old ones.

ISABEL. But then, to have to wait—wait—wait ; and before we've tried it ;—and perhaps it will rain to-morrow, too !

L. It may also rain the day after to-morrow. We can make ourselves uncomfortable to any extent with perhappses, Isabel. You may stick perhappses into your little minds, like pins, till you are as uncomfortable as the Lilliputians made Gulliver with their arrows, when he would not lie quiet.

ISABEL. But what *are* we to do to-day ?

L. To be quiet, for one thing, like Gulliver when he saw there was nothing better to be done. And to practise patience. I can tell you children, *that* requires nearly as much practising as music ; and we are continually losing our lessons when the master comes. Now, to-day, here's a nice little adagio lesson for us, if we play it properly.

ISABEL. But I don't like that sort of lesson. I can't play it properly.

L. Can you play a Mozart sonata yet, Isabel? The more need to practise. All one's life is a music, if one touches the notes rightly, and in time. But there must be no hurry.

KATHLEEN. I'm sure there's no music in stopping in on a rainy day.

L. There's no music in a 'rest,' Katie, that I know of: but there's the making of music in it. And people are always missing that part of the life-melody; and scrambling on without counting—not that it's easy to count; but nothing on which so much depends ever is easy. People are always talking of perseverance, and courage, and fortitude; but patience is the finest and worthiest part of fortitude,—and the rarest, too. I know twenty persevering girls for one patient one: but it is only that twenty-first who can do her work, out and out, or enjoy it. For patience lies at the root of all pleasures, as well as of all powers. Hope herself ceases to be happiness, when Impatience companions her.

(ISABEL and LILY sit down on the floor, and fold their hands. The others follow their example.)

Good children! but that's not quite the way of it, neither. Folded hands are not necessarily resigned ones. The Patience who really smiles at grief usually stands, or walks, or even runs: she seldom sits; though she may sometimes have to do it, for many a day, poor thing, by monuments; or like Chaucer's, 'with facü pale, upon a hill of sand.' But we are not reduced to that to-day. Suppose we use this calamitous forenoon to choose the shapes we are to crystallise into? we know nothing about them yet.

(The pictures of resignation rise from the floor, not in the patientest manner. General applause.)

MARY *(with one or two others)*. The very thing we wanted to ask you about!

LILY. We looked at the books about crystals, but they are so dreadful.

L. Well, Lily, we must go through a little dreadfulness, that's a fact: no road to any good knowledge is wholly among the lilies and the grass; there is rough climbing to be done always. But the crystal-books are a little *too* dreadful, most of them, I admit; and we shall have to be content with very little of their help. You know, as you cannot stand on each other's heads, you can only make yourselves into the sections of crystals,—the figures they show when they are cut through; and we will choose some that will be quite easy. You shall make diainonds of yourselves——

ISABEL. Oh, no, no! we won't be diamonds, please.

L. Yes, you shall, Isabel; they are very pretty things, if the jewellers, and the kings and queens, would only let them alone. You shall make diamonds of yourselves, and rubies of yourselves, and emeralds; and Irish diamonds; two of those—with Lily in the middle of one, which will be very orderly, of course; and Kathleen in the middle of the other, for which we will hope the best;—and you shall make Derbyshire spar of yourselves, and Iceland spar, and gold, and silver, and—Quicksilver there's enough of in you, without any making.

MARY. Now, you know, the children will be getting quite wild: we must really get pencils and paper, and begin properly.

L. Wait a minute, Miss Mary; I think as we've the school room clear to-day, I'll try to give you some notion of the three great orders or ranks of crystals, into which all the others seem more or less to fall. We shall only want one figure a day, in the playground; and that can be drawn in a minute: but the general ideas had better be fastened first. I must show you a great many minerals; so let me have three tables wheeled into the three windows, that we may keep our specimens separate;—we will keep the three orders of crystals on separate tables.

(First Interlude, of pushing and pulling, and spreading of baize covers. VIOLET, not particularly minding what she is about, gets herself jammed into a corner, and bid to stand out of the way; on which she devotes herself to meditation.)

VIOLET (*after interval of meditation*). How strange it is that everything seems to divide into threes !

L. Everything doesn't divide into threes. Ivy won't, though shamrock will ; and daisies won't, though lilies will.

VIOLET. But all the nicest things seem to divide into threes.

L. Violets won't.

VIOLET. No ; I should think not, indeed ! But I mean the great things.

L. I've always heard the globe had four quarters.

ISABEL. Well ; but you know you said it hadn't any quarters at all. So mayn't it really be divided into three ?

L. If it were divided into no more than three, on the outside of it, Isabel, it would be a fine world to live in ; and if it were divided into three in the inside of it, it would soon be no world to live in at all.

DORA. We shall never get to the crystals, at this rate. (*Aside to MARY.*) He will get off into political economy before we know where we are. (*Aloud.*) But the crystals are divided into three, then ?

L. No ; but there are three general notions by which we may best get hold of them. Then between these notions there are other notions.

LILY (*alarmed*). A great many ? And shall we have to learn them all ?

L. More than a great many—a quite infinite many. So you cannot learn them all.

LILY (*greatly relieved*). Then may we only learn the three ?

L. Certainly ; unless, when you have got those three notions, you want to have some more notions ;—which would not surprise me. But we'll try for the three, first. Katie, you broke your coral necklace this morning ?

KATHLEEN. Oh ! who told you ? It was in jumping. I'm so sorry !

L. I'm very glad. Can you fetch me the beads of it ?

KATHLEEN. I've lost some ; here are the rest in my pocket, if I can only get them out.

L. You mean to get them out some day, I suppose ; so try now. I want them.

(KATHLEEN empties her pocket on the floor. The beads disperse. The School disperses also. Second Interlude—*hunting piece.*)

L. (after waiting patiently for a quarter of an hour, to ISABEL, who comes up from under the table with her hair all about her ears, and the last findable beads in her hand). Mice are useful little things sometimes. Now, mousie, I want all those beads crystallised. How many ways are there of putting them in order?

ISABEL. Well, first one would string them, I suppose?

L. Yes, that's the first way. You cannot string ultimate atoms; but you can put them in a row, and then they fasten themselves together, somehow, into a long rod or needle. We will call these 'Needle-crystals.' What would be the next way?

ISABEL. I suppose, as we are to get together in the playground, when it stops raining, in different shapes?

L. Yes; put the beads together, then, in the simplest form you can, to begin with. Put them into a square, and pack them close.

ISABEL (after careful endeavour). I can't get them closer.

L. That will do. Now you may see, beforehand, that if you try to throw yourselves into square in this confused way, you will never know your places; so you had better consider every square as made of rods, put side by side. Take four beads of equal size, first, Isabel; put them into a little square. That, you may consider as made up of two rods of two beads each. Then you can make a square a size larger, out of three rods of three. Then the next square may be a size larger. How many rods, Lily?

LILY. Four rods of four beads each, I suppose.

L. Yes, and then five rods of five, and so on. But now, look here; make another square of four beads again. You see they leave a little opening in the centre.

ISABEL (pushing two opposite ones closer together). Now they don't.

L. No; but now it isn't a square; and by pushing the two together you have pushed the two others farther apart.

ISABEL. And yet, somehow, they all seem closer than they were!

L. Yes; for before, each of them only touched two of the others, but now each of the two in the middle touches the other three. Take away one of the outsiders, Isabel; now you have three in a triangle—the smallest triangle you can make out of the beads. Now put a rod of three beads on at one side. So, you have a triangle of six beads; but just the shape of the first one. Next a rod of four on the side of that; and you have a triangle of ten beads: then a rod of five on the side of that; and you have a triangle of fifteen. Thus you have a square with five beads on the side, and a triangle with five beads on the side; equal-sided, therefore, like the square. So, however few or many you may be, you may soon learn how to crystallise quickly into these two figures, which are the foundation of form in the commonest, and therefore actually the most important, as well as in the rarest, and therefore, by our esteem, the most important, minerals of the world. Look at this in my hand.

VIOLET. Why, it is leaf-gold!

L. Yes; but beaten by no man's hammer; or rather, not beaten at all, but woven. Besides, feel the weight of it. There is gold enough there to gild the walls and ceiling, if it were beaten thin.

VIOLET. How beautiful! And it glitters like a leaf covered with frost.

L. You only think it so beautiful because you know it is gold. It is not prettier, in reality, than a bit of brass: for it is Transylvanian gold; and they say there is a foolish gnome in the mines there, who is always wanting to live in the moon, and so alloys all the gold with a little silver. I don't know how that may be: but the silver always *is* in the gold; and if he does it, it's very provoking of him, for no gold is woven so fine anywhere else.

MARY (*who has been looking through her magnifying glass*). But this is not woven. This is all made of little triangles.

L. Say 'patched,' then, if you must be so particular. But if you fancy all those triangles, small as they are (and many

of them are infinitely small), made up again of rods, and those of grains, as we built our great triangle of the beads, what word will you take for the manufacture?

MAY. There's no word—it is beyond words.

L. Yes; and that would matter little, were it not beyond thoughts too. But, at all events, this yellow leaf of dead gold, shed, not from the ruined woodlands, but the ruined rocks, will help you to remember the second kind of crystals, *Leaf-crystals*, or *Foliated crystals*; though I show you the form in gold first only to make a strong impression on you, for gold is not generally, or characteristically, crystallised in leaves; the real type of foliated crystals is this thing, Mica; which if you once feel well, and break well, you will always know again; and you will often have occasion to know it, for you will find it everywhere, nearly, in hill countries.

KATHLEEN. If we break it well! May we break it?

L. To powder, if you like.

*(Surrenders plate of brown mica to public investigation.
Third Interlude. It sustains severely philosophical treatment at all hands.)*

FLORRIE. *(to whom the last fragments have descended)* Always leaves, and leaves, and nothing but leaves, or white dust!

L. That dust itself is nothing but finer leaves.

(Shows them to FLORRIE through magnifying glass.)

ISABEL *(peeping over FLORRIE's shoulder)*. But then this bit under the glass looks like that bit out of the glass! If we could break this bit under the glass, what would it be like?

L. It would be all leaves still.

ISABEL. And then if we broke those again?

L. All less leaves still.

ISABEL *(impatient)*. And if we broke them again, and again, and again, and again, and again?

L. Well, I suppose you would come to a limit, if you could only see it. Notice that the little flakes already differ somewhat from the large ones: because I can bend them up and down, and they stay bent; while the large flake, though it bent easily a little way, sprang back when you let it go, and

broke, when you tried to bend it far. And a large mass would not bend at all.

MARY. Would that leaf gold separate into finer leaves, in the same way?

L. No; and therefore, as I told you, it is not a characteristic specimen of a foliated crystallisation. The little triangles are portions of solid crystals, and so they are in this, which looks like a black mica; but you see it is made up of triangles like the gold, and stands, almost accurately, as an intermediate link, in crystals, between mica and gold. Yet this is the commonest, as gold the rarest, of metals.

MARY. Is it iron? I never saw iron so bright.

L. It is rust of iron, finely crystallised: from its resemblance to mica, it is often called micaceous iron.

KATHLEEN. May we break this, too?

L. No, for I could not easily get such another crystal; besides, it would not break like the mica; it is much harder. But take the glass again, and look at the fineness of the jagged edges of the triangles where they lap over each other. The gold has the same: but you see them better here, terrace above terrace, countless, and in successive angles, like superb fortified bastions.

MAY. But all foliated crystals are not made of triangles?

L. Far from it; mica is occasionally so, but usually of hexagons; and here is a foliated crystal made of squares, which will show you that the leaves of the rock-land have their summer green, as well as their autumnal gold.

FLORRIE. Oh! oh! oh! (*jumps for joy*).

L. Did you never see a bit of green leaf before, Florrie?

FLORRIE. Yes, but never so bright as that, and not in a stone.

L. If you will look at the leaves of the trees in sunshine after a shower, you will find they are much brighter than that; and surely they are none the worse for being on stalks instead of in stones?

FLORRIE. Yes, but then there are so many of them, one never looks, I suppose.

L. Now you have it, Florrie.

VIOLET (*sighing*). There are so many beautiful things we never see!

L. You need not sigh for that, Violet; but I will tell you what we should all sigh for,—that there are so many ugly things we never see.

VIOLET. But we don't want to see ugly things!

L. You had better say, 'We don't want to suffer them.' You ought to be glad in thinking how much more beauty God has made, than human eyes can ever see; but not glad in thinking how much more evil man has made, than his own soul can ever conceive, much more than his hands can ever heal.

VIOLET. I don't understand;—how is that like the leaves?

L. The same law holds in our neglect of multiplied pain, as in our neglect of multiplied beauty. Florrie jumps for joy at sight of half an inch of a green leaf in a brown stone; and takes more notice of it than of all the green in the wood: and you, or I, or any of us, would be unhappy if any single human creature beside us were in sharp pain; but we can read, at breakfast, day after day, of men being killed, and of women and children dying of hunger, faster than the leaves strew the brooks in Vallombrosa;—and then go out to play croquet, as if nothing had happened.

MAY. But we do not see the people being killed or dying.

L. You did not see your brother, when you got the telegram the other day, saying he was ill, May; but you cried for him; and played no croquet. But we cannot talk of these things now; and what is more, you must let me talk straight on, for a little while; and ask no questions till I've done: for we branch ('exfoliate,' I should say, mineralogically) always into something else,—though that's my fault more than yours; but I must go straight on now. You have got a distinct notion, I hope, of leaf-crystals; and you see the sort of look they have: you can easily remember that 'folium' is Latin for a leaf, and that the separate flakes of mica, or any other such stones, are called 'folia;' but, because mica is the most characteristic of these stones, other things that are like it in structure are called 'micas;' thus we have Uran-mica, which

is the green leaf I showed you ; and Copper-mica, which is another like it, made chiefly of copper ; and this foliated iron is called 'micaceous iron.' You have then these two great orders, Needle-crystals, made (probably) of grains in rows ; and Leaf-crystals, made (probably) of needles interwoven ; now, lastly, there are crystals of a third order, in heaps, or knots, or masses, which may be made, either of leaves laid one upon another, or of needles bound like Roman fasces ; and mica itself, when it is well crystallised, puts itself into such masses, as if to show us how others are made. Here is a brown six-sided crystal, quite as beautifully chiselled at the sides as any castle tower ; but you see it is entirely built of folia of mica, one laid above another, which break away the moment I touch the edge with my knife. Now, here is another hexagonal tower, of just the same size and colour, which I want you to compare with the mica carefully ; but as I cannot wait for you to do it just now, I must tell you quickly what main differences to look for. First, you will feel it is far heavier than the mica. Then, though its surface looks quite micaceous in the folia of it, when you try them with the knife, you will find you cannot break them away——

KATHLEEN. May I try ?

L. Yes, you mistrusting Katie. Here's my strong knife for you. (*Experimental pause. KATHLEEN doing her best.*) You'll have that knife shutting on your finger presently, Kate ; and I don't know a girl who would like less to have her hand tied up for a week.

KATHLEEN (*who also does not like to be beaten—giving up the knife despondently*). What can the nasty hard thing be ?

L. It is nothing but indurated clay, Kate : very hard set certainly, yet not so hard as it might be. If it were thoroughly well crystallised, you would see none of those micaceous fractures ; and the stone would be quite red and clear, all through.

KATHLEEN. Oh, cannot you show us one ?

L. Egypt can, if you ask her ; she has a beautiful one in the clasp of her favourite bracelet.

KATHLEEN. Why, that's a ruby !

L. Well, so is that thing you've been scratching at.

KATHLEEN. My goodness!

(Takes up the stone again, very delicately; and drops it.
General consternation.)

L. Never mind, Katie; you might drop it from the top of the house, and do it no harm. But though you really are a very good girl, and as good-natured as anybody can possibly be, remember, you have your faults, like other people; and, if I were you, the next time I wanted to assert anything energetically, I would assert it by 'my badness,' not 'my goodness.'

KATHLEEN. Ah, now, it's too bad of you!

L. Well, then, I'll invoke, on occasion, my 'too-badness.' But you may as well pick up the ruby, now you have dropped it; and look carefully at the beautiful hexagonal lines which gleam on its surface; and here is a pretty white sapphire (essentially the same stone as the ruby), in which you will see the same lovely structure, like the threads of the finest white cobweb. I do not know what is the exact method of a ruby's construction; but you see by these lines, what fine construction there is, even in this hardest of stones (after the diamond), which usually appears as a massive lump or knot. There is therefore no real mineralogical distinction between needle crystals and knotted crystals, but, practically, crystallised masses throw themselves into one of the three groups we have been examining to-day; and appear either as Needles, as Folia, or as Knots; when they are in needles (or fibres), they make the stones or rocks formed out of them '*fibrous*;' when they are in folia, they make them '*foliated*;' when they are in knots (or grains), '*granular*.' Fibrous rocks are comparatively rare, in mass; but fibrous minerals are innumerable; and it is often a question which really no one but a young lady could possibly settle, whether one should call the fibres composing them 'threads' or 'needles.' Here is amianthus, for instance, which is quite as fine and soft as any cotton thread you ever sewed with; and here is sulphide of bismuth, with sharper points and brighter lustre than your finest

needles have ; and fastened in white webs of quartz more delicate than your finest lace ; and here is sulphide of antimony, which looks like mere purple wool, but it is all of purple needle crystals ; and here is red oxide of copper (you must not breathe on it as you look, or you may blow some of the films of it off the stone), which is simply a woven tissue of scarlet silk. However, these finer thread forms are comparatively rare, while the bolder and needle-like crystals occur constantly ; so that, I believe, 'Needle-crystal' is the best word (the grand one is 'Acicular crystal,' but Sibyl will tell you it is all the same, only less easily understood ; and therefore more scientific). Then the Leaf-crystals, as I said, form an immense mass of foliated rocks ; and the Granular crystals, which are of many kinds, form essentially granular, or granitic and porphyritic rocks ; and it is always a point of more interest to me (and I think will ultimately be to you), to consider the causes which force a given mineral to take any one of these three general forms, than what the peculiar geometrical limitations are, belonging to its own crystals.* It is more interesting to me, for instance, to try and find out why the red oxide of copper, usually crystallising in cubes or octahedrons, makes itself exquisitely, out of its cubes, into this red silk in one particular Cornish mine, than what are the absolutely necessary angles of the octahedron, which is its common form. At all events, that mathematical part of crystallography is quite beyond girls' strength ; but these questions of the various tempers and manners of crystals are not only comprehensible by you, but full of the most curious teaching for you. For in the fulfilment, to the best of their power, of their adopted form under given circumstances, there are conditions entirely resembling those of human virtue ; and indeed expressible under no term so proper as that of the Virtue, or Courage of crystals :—which, if you are not afraid of the crystals making you ashamed of yourselves, we will try to get some notion of, to-morrow. But it will be a bye-lecture, and more about yourselves than the minerals. Don't come unless you like.

* Note iv.

MARY. I'm sure the crystals will make us ashamed of ourselves ; but we'll come, for all that.

L. Meantime, look well and quietly over these needle, or thread crystals, and those on the other two tables, with magnifying glasses, and see what thoughts will come into your little heads about them. For the best thoughts are generally those which come without being forced, one does not know how. And so I hope you will get through your wet day patiently.

LECTURE V.

CRYSTAL VIRTUES.

A quiet talk, in the afternoon, by the sunniest window of the Drawing-room. Present, FLORRIE, ISABEL, MAY, LUCILLA, KATHLEEN, DORA, MARY, and some others, who have saved time for the bye-Lecture.

L. So you have really come, like good girls, to be made ashamed of yourselves?

DORA (*very meekly*). No, we needn't be made so ; we always are.

L. Well, I believe that's truer than most pretty speeches : but you know, you saucy girl, some people have more reason to be so than others. Are you sure everybody is, as well as you?

THE GENERAL VOICE. Yes, yes ; everybody.

L. What ! Florrie ashamed of herself?

(FLORRIE *hides behind the curtain.*)

L. And Isabel?

(ISABEL *hides under the table.*)

L. And May?

(MAY *runs into the corner behind the piano.*)

L. And Lucilla?

(LUCILLA *hides her face in her hands.*)

L. Dear, dear ; but this will never do. I shall have to tell you of the faults of the crystals, instead of virtues, to put you in heart again.

MAY (*coming out of her corner*). Oh ! have the crystals faults, like us?

L. Certainly, May. Their best virtues are shown in fighting their faults. And some have a great many faults ; and some are very naughty crystals indeed.

FLORRIE (*from behind her curtain*). As naughty as me?

ISABEL (*peeping from under the table cloth*). Or me?

L. Well, I don't know. They never forget their syntax, children, when once they've been taught it. But I think some of them are, on the whole, worse than any of you. Not that it's amiable of you to look so radiant, all in a minute, on that account.

DORA. Oh ! but it's so much more comfortable.

(Everybody seems to recover their spirits. Eclipse of FLORIE and ISABEL terminates.)

L. What kindly creatures girls are, after all, to their neighbours' failings ! I think you may be ashamed of yourselves indeed, now, children ! I can tell you, you shall hear of the highest crystalline merits that I can think of, to-day : and I wish there were more of them ; but crystals have a limited, though a stern, code of morals ; and their essential virtues are but two ;—the first is to be pure, and the second to be well shaped.

MARY. Pure ! Does that mean clear—transparent ?

L. No ; unless in the case of a transparent substance. You cannot have a transparent crystal of gold ; but you may have a perfectly pure one.

ISABEL. But you said it was the shape that made things be crystals ; therefore, oughtn't their shape to be their first virtue, not their second ?

L. Right, you troublesome mousie. But I call their shape only their second virtue, because it depends on time and accident, and things which the crystal cannot help. If it is cooled too quickly, or shaken, it must take what shape it can ; but it seems as if, even then, it had in itself the power of rejecting impurity, if it has crystalline life enough. Here is a crystal of quartz, well enough shaped in its way ; but it seems to have been languid and sick at heart ; and some white milky substance has got into it, and mixed itself up with it, all through. It makes the quartz quite yellow, if you hold it up to the light, and milky blue on the surface. Here is another, broken into a thousand separate facets, and out of all traceable shape ; but as pure as a mountain spring. I like this one best.

THE AUDIENCE. So do I—and I—and I.

MARY. Would a crystallographer?

L. I think so. He would find many more laws curiously exemplified in the irregularly grouped but pure crystal. But it is a futile question, this of first or second. Purity is in most cases a prior, if not a nobler, virtue; at all events it is most convenient to think about it first.

MARY. But what ought we to think about it? Is there much to be thought—I mean, much to puzzle one?

L. I don't know what you call 'much.' It is a long time since I met with anything in which there was little. There's not much in this, perhaps. The crystal must be either dirty or clean,—and there's an end. So it is with one's hands, and with one's heart—only you can wash your hands without changing them, but not hearts, nor crystals. On the whole, while you are young, it will be as well to take care that your hearts don't want much washing; for they may perhaps need wringing also, when they do.

(Audience doubtful and uncomfortable. LUCILLA at last takes courage.)

LUCILLA. Oh! but surely, sir, we cannot make our hearts clean?

L. Not easily, Lucilla; so you had better keep them so when they are.

LUCILLA. When they are! But, sir—

L. Well?

LUCILLA. Sir—surely—are we not told that they are all evil?

L. Wait a little, Lucilla; that is difficult ground you are getting upon; and we must keep to our crystals, till at least we understand what *their* good and evil consist in; they may help us afterwards to some useful hints about our own. I said that their goodness consisted chiefly in purity of substance, and perfectness of form: but those are rather the *effects* of their goodness, than the goodness itself. The inherent virtues of the crystals, resulting in these outer conditions, might really seem to be best described in the words we should

use respecting living creatures—‘force of heart’ and ‘steadiness of purpose.’ There seem to be in some crystals, from the beginning, an unconquerable purity of vital power, and strength of crystal spirit. Whatever dead substance, unacceptant of this energy, comes in their way, is either rejected, or forced to take some beautiful subordinate form; the purity of the crystal remains unsullied, and every atom of it bright with coherent energy. Then the second condition is, that from the beginning of its whole structure, a fine crystal seems to have determined that it will be of a certain size and of a certain shape; it persists in this plan, and completes it. Here is a perfect crystal of quartz for you. It is of an unusual form, and one which it might seem very difficult to build—a pyramid with convex sides, composed of other minor pyramids. But there is not a flaw in its contour throughout; not one of its myriads of component sides but is as bright as a jeweller’s facettted work (and far finer, if you saw it close). The crystal points are as sharp as javelins; their edges will cut glass with a touch. Anything more resolute, consummate, determinate in form, cannot be conceived. Here, on the other hand, is a crystal of the same substance, in a perfectly simple type of form—a plain six-sided prism; but from its base to its point,—and it is nine inches long,—it has never for one instant made up its mind what thickness it will have. It seems to have begun by making itself as thick as it thought possible with the quantity of material at command. Still not being as thick as it would like to be, it has clumsily glued on more substance at one of its sides. Then it has thinned itself, in a panic of economy; then puffed itself out again; then starved one side to enlarge another; then warped itself quite out of its first line. Opaque, rough-surfaced, jagged on the edge, distorted in the spine, it exhibits a quite human image of decrepitude and dishonour; but the worst of all the signs of its decay and helplessness, is that half-way up, a parasite crystal, smaller, but just as sickly, has rooted itself in the side of the larger one, eating out a cavity round its root, and then growing backwards, or downwards, contrary to the direction of the main crystal. Yet I cannot trace the least difference in

purity of substance between the first most noble stone, and this ignoble and dissolute one. The impurity of the last is in its will, or want of will.

MARY. Oh, if we could but understand the meaning of it all!

L. We can understand all that is good for us. It is just as true for us, as for the crystal, that the nobleness of life depends on its consistency,—clearness of purpose,—quiet and ceaseless energy. All doubt, and repenting, and botching, and retouching, and wondering what it will be best to do next, are vice, as well as misery.

MARY (*much wondering*). But must not one repent when one does wrong, and hesitate when one can't see one's way?

L. You have no business at all to do wrong; nor to get into any way that you cannot see. Your intelligence should always be far in advance of your act. Whenever you do not know what you are about, you are sure to be doing wrong.

KATHLEEN. Oh, dear, but I never know what I am about!

L. Very true, Katie, but it is a great deal to know, if you know that. And you find that you have done wrong afterwards; and perhaps some day you may begin to know, or at least, think, what you are about.

ISABEL. But surely people can't do very wrong if they don't know, can they? I mean, they can't be very naughty. They can be wrong, like Kathleen or me, when we make mistakes; but not wrong in the dreadful way. I can't express what I mean; but there are two sorts of wrong are there not?

L. Yes, Isabel; but you will find that the great difference is between kind and unkind wrongs, not between meant and unmeant wrong. Very few people really mean to do wrong,—in a deep sense, none. They only don't know what they are about. Cain did not mean to do wrong when he killed Abel.

(ISABEL *draws a deep breath, and opens her eyes very wide.*)

L. No, Isabel; and there are countless Cains among us now, who kill their brothers by the score a day, not only for less provocation than Cain had, but for *no* provocation,—and

merely for what they can make of their bones,—yet do not think they are doing wrong in the least. Then sometimes you have the business reversed, as over in America these last years, where you have seen Abel resolutely killing Cain, and not thinking he is doing wrong. The great difficulty is always to open people's eyes: to touch their feelings, and break their hearts, is easy; the difficult thing is to break their heads. What does it matter, as long as they remain stupid, whether you change their feelings or not? You cannot be always at their elbow to tell them what is right: and they may just do as wrong as before, or worse; and their best intentions merely make the road smooth for them,—you know where, children. For it is not the place itself that is paved with them, as people say so often. You can't pave the bottomless pit; but you may the road to it.

MAY. Well, but if people do as well as they can see how, surely that is the right for them, isn't it?

L. No, May, not a bit of it; right is right, and wrong is wrong. It is only the fool who does wrong, and says he 'did it for the best.' And if there's one sort of person in the world that the Bible speaks harder of than another, it is fools. Their particular and chief way of saying 'There is no God' is this, of declaring that whatever their 'public opinion' may be, is right: and that God's opinion is of no consequence.

MAY. But surely nobody can always know what is right?

L. Yes, you always can, for to-day; and if you do what you see of it to-day, you will see more of it, and more clearly, to-morrow. Here, for instance, you children are at school, and have to learn French, and arithmetic, and music, and several other such things. That is your 'right' for the present; the 'right' for us, your teachers, is to see that you learn as much as you can, without spoiling your dinner, your sleep, or your play; and that what you do learn, you learn well. You all know when you learn with a will, and when you dawdle. There's no doubt of conscience about that, I suppose?

VIOLET. No; but if one wants to read an amusing book, instead of learning one's lesson?

L. You don't call that a 'question,' seriously, Violet? You

are then merely deciding whether you will resolutely do wrong or not.

MARY. But, in after life, how many fearful difficulties may arise, however one tries to know or to do what is right!

L. You are much too sensible a girl, Mary, to have felt that, whatever you may have seen. A great many of young ladies' difficulties arise from their falling in love with a wrong person: but they have no business to let themselves fall in love, till they know he is the right one.

DORA. How many thousands ought he to have a year?

L. (*disdaining reply*). There are, of course, certain crises of fortune when one has to take care of oneself, and mind shrewdly what one is about. There is never any real doubt about the path, but you may have to walk very slowly.

MARY. And if one is forced to do a wrong thing by some one who has authority over you?

L. My dear, no one can be forced to do a wrong thing, for the guilt is in the will: but you may any day be forced to do a fatal thing, as you might be forced to take poison; the remarkable law of nature in such cases being, that it is always unfortunate *you* who are poisoned, and not the person who gives you the dose. It is a very strange law, but it *is* a law. Nature merely sees to the carrying out of the normal operation of arsenic. She never troubles herself to ask who gave it you. So also you may be starved to death, morally as well as physically, by other people's faults. You are, on the whole, very good children sitting here to-day;—do you think that your goodness comes all by your own contriving? or that you are gentle and kind because your dispositions are naturally more angelic than those of the poor girls who are playing, with wild eyes, on the dustheaps in the alleys of our great towns; and who will one day fill their prisons,—or, better, their graves? Heaven only knows where they, and we who have cast them there, shall stand at last. But the main judgment question will be, I suppose, for all of us, 'Did you keep a good heart through it?' What you were, others may answer for;—what you tried to be, you must answer for, yourself. Was the heart pure and true—tell us that?

And so we come back to your sorrowful question, Lucilla, which I put aside a little ago. You would be afraid to answer that your heart *was* pure and true, would not you?

LUCILLA. Yes, indeed, sir.

L. Because you have been taught that it is all evil—‘only evil continually.’ Somehow, often as people say that, they never seem, to me, to believe it? Do you really believe it?

LUCILLA. Yes, sir; I hope so.

L. That you have an entirely bad heart?

LUCILLA (*a little uncomfortable at the substitution of the monosyllable for the dissyllable, nevertheless persisting in her orthodoxy*). Yes, sir.

L. Florrie, I am sure you are tired; I never like you to stay when you are tired; but, you know, you must not play with the kitten while we’re talking.

FLORRIE. Oh! but I’m not tired; and I’m only nursing her. She’ll be asleep in my lap directly.

L. Stop! that puts me in mind of something I had to show you, about minerals that are like hair. I want a hair out of Tittie’s tail.

FLORRIE (*quite rude, in her surprise, even to the point of repeating expressions*). Out of Tittie’s tail!

L. Yes; a brown one: Lucilla, you can get at the tip of it nicely, under Florrie’s arm; just pull one out for me.

LUCILLA. Oh! but, sir, it will hurt her so!

L. Never mind; she can’t scratch you while Florrie is holding her. Now that I think of it, you had better pull out two.

LUCILLA. But then she may scratch Florrie! and it will hurt her so, sir! if you only want brown hairs, wouldn’t two of mine do?

L. Would you really rather pull out your own than Tittie’s?

LUCILLA. Oh, of course, if mine will do.

L. But that’s very wicked, Lucilla!

LUCILLA. Wicked, sir?

L. Yes; if your heart was not so bad, you would much rather pull all the cat’s hairs out, than one of your own.

LUCILLA. Oh! but sir, I didn’t mean bad, like that.

L. I believe, if the truth were told, Lucilla, you would like to tie a kettle to Tittie's tail, and hunt her round the playground.

LUCILLA. Indeed, I should not, sir.

L. That's not true, Lucilla ; you know it cannot be.

LUCILLA. Sir?

L. Certainly it is not ;—how can you possibly speak any truth out of such a heart as you have ? It is wholly deceitful.

LUCILLA. Oh ! no, no ; I don't mean that way ; I don't mean that it makes me tell lies, quite out.

L. Only that it tells lies within you ?

LUCILLA. Yes.

L. Then, outside of it, you know what is true, and say so ; and I may trust the outside of your heart ; but within, it is all foul and false. Is that the way ?

LUCILLA. I suppose so : I don't understand it, quite.

L. There is no occasion for understanding it ; but do you feel it ? Are you sure that your heart is deceitful above all things, and desperately wicked ?

LUCILLA (*much relieved by finding herself among phrases with which she is acquainted*). Yes, sir. I'm sure of that.

L. (*pensively*). I'm sorry for it, Lucilla.

LUCILLA. So am I, indeed.

L. What are you sorry with, Lucilla ?

LUCILLA. Sorry with, sir ?

L. Yes ; I mean, where do you feel sorry ? in your feet ?

LUCILLA (*laughing a little*). No, sir, of course.

L. In your shoulders, then ?

LUCILLA. No, sir.

L. You are sure of that ? Because, I fear, sorrow in the shoulders would not be worth much.

LUCILLA. I suppose I feel it in my heart, if I really am sorry.

L. If you really are ! Do you mean to say that you are sure you are utterly wicked, and yet do not care ?

LUCILLA. No, indeed ; I have cried about it often.

L. Well, then, you are sorry in your heart ?

LUCILLA. Yes, when the sorrow is worth anything.

L. Even if it be not, it cannot be anywhere else but there. It is not the crystalline lens of your eyes which is sorry, when you cry?

LUCILLA. No, sir, of course.

L. Then, have you two hearts; one of which is wicked, and the other grieved? or is one side of it sorry for the other side?

LUCILLA (*weary of cross-examination, and a little vexed*). Indeed, sir, you know I can't understand it; but you know how it is written—'another law in my members, warring against the law of my mind.'

L. Yes, Lucilla, I know how it is written; but I do not see that it will help us to know that, if we neither understand what is written, nor feel it. And you will not get nearer to the meaning of one verse, if, as soon as you are puzzled by it, you escape to another, introducing three new words—'law,' 'members,' and 'mind'; not one of which you at present know the meaning of; and respecting which, you probably never will be much wiser; since men like Montesquieu and Locke have spent great part of their lives in endeavouring to explain two of them.

LUCILLA. Oh! please, sir, ask somebody else.

L. If I thought anyone else could answer better than you, Lucilla, I would; but suppose I try, instead, myself, to explain your feelings to you?

LUCILLA. Oh, yes; please do.

L. Mind, I say your 'feelings,' not your 'belief.' For I cannot undertake to explain anybody's beliefs. Still I must try a little, first, to explain the belief also, because I want to draw it to some issue. As far as I understand what you say, or any one else, taught as you have been taught, says, on this matter,—you think that there is an external goodness, a whited-sepulchre kind of goodness, which appears beautiful outwardly, but is within full of uncleanness: a deep secret guilt, of which we ourselves are not sensible; and which can only be seen by the Maker of us all. (*Approving murmurs from audience.*)

L. Is it not so with the body as well as the soul?

(*Looked notes of interrogation.*)

L. A skull, for instance, is not a beautiful thing?

(*Grave faces, signifying 'Certainly not,' and 'What next?'*)

L. And if you all could see in each other, with clear eyes, whatever God sees beneath those fair faces of yours, you would not like it?

(*Murmured 'No's.'*)

L. Nor would it be good for you?

(*Silence.*)

L. The probability being that what God does not allow you to see, He does not wish you to see; nor even to think of?

(*Silence prolonged.*)

L. It would not at all be good for you, for instance, whenever you were washing your faces, and braiding your hair, to be thinking of the shapes of the jawbones, and of the cartilage of the nose, and of the jagged sutures of the scalp?

(*Resolutely whispered No's.*)

L. Still less, to see through a clear glass the daily processes of nourishment and decay?

(*No.*)

L. Still less if instead of merely inferior and preparatory conditions of structure, as in the skeleton,—or inferior offices of structure, as in operations of life and death,—there were actual disease in the body; ghastly and dreadful. You would try to cure it; but having taken such measures as were necessary, you would not think the cure likely to be promoted by perpetually watching the wounds, or thinking of them. On the contrary, you would be thankful for every moment of forgetfulness: as, in daily health, you must be thankful that your Maker has veiled whatever is fearful in your frame under a sweet and manifest beauty; and has made it your duty, and your only safety, to rejoice in that, both in yourself and in others:—not indeed concealing, or refusing to believe in sickness, if it come; but never dwelling on it.

Now, your wisdom and duty touching soul-sickness are just the same. Ascertain clearly what is wrong with you; and so

far as you know any means of mending it, take those means, and have done : when you are examining yourself, never call yourself merely a 'sinner,' that is very cheap abuse ; and utterly useless. You may even get to like it, and be proud of it. But call yourself a liar, a coward, a sluggard, a glutton, or an evil-eyed jealous wretch, if you indeed find yourself to be in any wise any of these. Take steady means to check yourself in whatever fault you have ascertained, and justly accused yourself of. And as soon as you are in active way of mending, you will be no more inclined to moan over an undefined corruption. For the rest, you will find it less easy to uproot faults, than to choke them by gaining virtues. Do not think of your faults ; still less of others' faults : in every person who comes near you, look for what is good and strong : honour that ; rejoice in it ; and, as you can, try to imitate it : and your faults will drop off, like dead leaves, when their time comes. If, on looking back, your whole life should seem rugged as a palm tree stem ; still, never mind, so long as it has been growing ; and has its grand green shade of leaves, and weight of honied fruit, at top. And even if you cannot find much good in yourself at last, think that it does not much matter to the universe either what you were, or are ; think how many people are noble, if you cannot be ; and rejoice in *their* nobleness. An immense quantity of modern confession of sin, even when honest, is merely a sickly egotism ; which will rather gloat over its own evil, than lose the centralisation of its interest in itself.

MARY. But then, if we ought to forget ourselves so much, how did the old Greek proverb 'Know thyself' come to be so highly esteemed ?

L. My dear, it is the proverb of proverbs ; Apollo's proverb, and the sun's ;—but do you think you can know yourself by looking *into* yourself ? Never. You can know what you are, only by looking *out* of yourself. Measure your own powers with those of others ; compare your own interests with those of others ; try to understand what you appear to them, as well as what they appear to you ; and judge of yourselves, in all things, relatively and subordinately ; not posi-

tively : starting always with a wholesome conviction of the probability that there is nothing particular about you. For instance, some of you perhaps think you can write poetry. Dwell on your own feelings and doings :—and you will soon think yourselves Tenth Muses ; but forget your own feelings ; and try, instead, to understand a line or two of Chaucer or Dante : and you will soon begin to feel yourselves very foolish girls—which is much like the fact.

So, something which befalls you may seem a great misfortune ;—you meditate over its effects on you personally ; and begin to think that it is a chastisement, or a warning, or a this or that or the other of profound significance ; and that all the angels in heaven have left their business for a little while, that they may watch its effects on your mind. But give up this egotistic indulgence of your fancy ; examine a little what misfortunes, greater a thousandfold, are happening, every second, to twenty times worthier persons : and your self-consciousness will change into pity and humility ; and you will know yourself, so far as to understand that ‘ there hath nothing taken thee but what is common to man.’

Now, Lucilla, these are the practical conclusions which any person of sense would arrive at, supposing the texts which relate to the inner evil of the heart were as many, and as prominent, as they are often supposed to be by careless readers. But the way in which common people read their Bibles is just like the way that the old monks thought hedgehogs ate grapes. They rolled themselves (it was said), over and over, where the grapes lay on the ground. What fruit stuck to their spines, they carried off, and ate. So your hedgehoggy readers roll themselves over and over their Bibles, and declare that whatever sticks to their own spines is Scripture ; and that nothing else is. But you can only get the skins of the texts that way. If you want their juice, you must press them in cluster. Now, the clustered texts about the human heart insist, as a body, not on any inherent corruption in all hearts, but on the terrific distinction between the bad and the good ones. ‘ A good man, out of the good treasure of his heart, bringeth forth that which is good ; and an evil man, out of

the evil treasure, bringeth forth that which is evil.' 'They on the rock are they which, in an honest and good heart, having heard the word, keep it.' 'Delight thyself in the Lord, and He shall give thee the desires of thine heart.' 'The wicked have bent their bow, that they may privily shoot at him that is upright in heart.' And so on; they are countless, to the same effect. And, for all of us, the question is not at all to ascertain how much or how little corruption there is in human nature; but to ascertain whether, out of all the mass of that nature, we are of the sheep or the goat breed; whether we are people of upright heart, being shot at, or people of crooked heart, shooting. And, of all the texts bearing on the subject, this, which is a quite simple and practical order, is the one you have chiefly to hold in mind. 'Keep thy heart with all diligence, for out of it are the issues of life.'

LUCILLA. And yet, how inconsistent the texts seem!

L. Nonsense, Lucilla! do you think the universe is bound to look consistent to a girl of fifteen? Look up at your own room window;—you can just see it from where you sit. I'm glad that it is left open, as it ought to be, in so fine a day. But do you see what a black spot it looks, in the sun-lighted wall?

LUCILLA. Yes, it looks as black as ink.

L. Yet you know it is a very bright room when you are inside of it; quite as bright as there is any occasion for it to be, that its little lady may see to keep it tidy. Well, it is very probable, also, that if you could look into your heart from the sun's point of view, it might appear a very black hole indeed: nay, the sun may sometimes think good to tell you that it looks so to Him; but He will come into it, and make it very cheerful for you, for all that, if you don't put the shutters up. And the one question for *you*, remember, is not 'dark or light?' but 'tidy or untidy?' Look well to your sweeping and garnishing; and be sure it is only the banished spirit, or some of the seven wickeder ones at his back, who will still whisper to you that it is all black.

LECTURE VI.

CRYSTAL QUARRELS.

Full conclave, in Schoolroom. There has been a game at crystallisation in the morning, of which various account has to be rendered. In particular, everybody has to explain why they were always where they were not intended to be.

L. (*having received and considered the report*). You have got on pretty well, children : but you know these were easy figures you have been trying. Wait till I have drawn you out the plans of some crystals of snow !

MARY. I don't think those will be the most difficult :—they are so beautiful that we shall remember our places better ; and then they are all regular, and in stars : it is those twisty oblique ones we are afraid of.

L. Read Carlyle's account of the battle of Leuthen, and learn Freidrich's 'oblique order.' You will 'get it done for once, I think, provided you *can* march as a pair of compasses would.' But remember, when you can construct the most difficult single figures, you have only learned half the game—nothing so much as the half, indeed, as the crystals themselves play it.

MARY. Indeed ; what else is there ?

L. It is seldom that any mineral crystallises alone. Usually two or three, under quite different crystalline laws, form together. They do this absolutely without flaw or fault, when they are in fine temper : and observe what this signifies. It signifies that the two, or more, minerals of different natures agree, somehow, between themselves, how much space each will want ;—agree which of them shall give away to the other at their junction ; or in what measure each will accommodate itself to the other's shape ! And then each takes its permitted shape, and allotted share of space ; yielding, or being

yielded to, as it builds, till each crystal has fitted itself perfectly and gracefully to its differently-natured neighbour. So that, in order to practise this, in even the simplest terms, you must divide into two parties, wearing different colours; each much choose a different figure to construct; and you must form one of these figures through the other, both going on at the same time.

MARY. I think *we* may, perhaps, manage it; but I cannot at all understand how the crystals do. It seems to imply so much preconcerting of plan, and so much giving way to each other, as if they really were living.

L. Yes, it implies both concurrence and compromise, regulating all wilfulness of design: and, more curious still, the crystals do *not* always give way to each other. They show exactly the same varieties of temper that human creatures might. Sometimes they yield the required place with perfect grace and courtesy; forming fantastic, but exquisitely finished groups: and sometimes they will not yield at all; but fight furiously for their places, losing all shape and honour, and even their own likeness, in the contest.

MARY. But is not that wholly wonderful? How is it that one never sees it spoken of in books?

L. The scientific men are all busy in determining the constant laws under which the struggle takes place; these indefinite humours of the elements are of no interest to them. And unscientific people rarely give themselves the trouble of thinking at all when they look at stones. Not that it is of much use to think; the more one thinks, the more one is puzzled.

MARY. Surely it is more wonderful than anything in botany?

L. Everything has its own wonders; but, given the nature of the plant, it is easier to understand what a flower will do, and why it does it, than, given anything we as yet know of stone-nature, to understand what a crystal will do, and why it does it. You at once admit a kind of volition and choice, in the flower; but we are not accustomed to attribute anything of the kind to the crystal. Yet there is, in reality, more like-

ness to some conditions of human feeling among stones than among plants. There is a far greater difference between kindly-tempered and ill-tempered crystals of the same mineral, than between any two specimens of the same flower : and the friendships and wars of crystals depend more definitely and curiously on their varieties of disposition, than any associations of flowers. Here, for instance, is a good garnet, living with good mica ; one rich red, and the other silver white : the mica leaves exactly room enough for the garnet to crystallise comfortably in ; and the garnet lives happily in its little white house ; fitted to it, like a pholas in its cell. But here are wicked garnets living with wicked mica. See what ruin they make of each other ! You cannot tell which is which ; the garnets look like dull red stains on the crumbling stone. By the way, I never could understand, if St. Gothard is a real saint, why he can't keep his garnets in better order. These are all under his care ; but I suppose there are too many of them for him to look after. The streets of Airolo are paved with them.

MAY. Paved with garnets ?

L. With mica-slate and garnets ; I broke this bit out of a paving stone. Now garnets and mica are natural friends, and generally fond of each other ; but you see how they quarrel when they are ill brought up. So it is always. Good crystals are friendly with almost all other good crystals, however little they chance to see of each other, or however opposite their habits may be ; while wicked crystals quarrel with one another, though they may be exactly alike in habits, and see each other continually. And of course the wicked crystals quarrel with the good ones.

ISABEL. Then do the good ones get angry ?

L. No, never : they attend to their own work and life ; and live it as well as they can, though they are always the sufferers. Here, for instance, is a rock-crystal of the purest race and finest temper, who was born, unhappily for him, in a bad neighbourhood, near Beaufort in Savoy ; and he has had to fight with vile calcareous mud all his life. See here, when he was but a child, it came down on him, and nearly buried him ; a

weaker crystal would have died in despair ; but he only gathered himself together, like Hercules against the serpents, and threw a layer of crystal over the clay ; conquered it,—imprisoned it,—and lived on. Then, when he was a little older, came more clay ; and poured itself upon him here, at the side ; and he has laid crystal over that, and lived on, in his purity. Then the clay came on at his angles, and tried to cover them, and round them away ; but upon that he threw out buttress-crystals at his angles ; all as true to his own central line as chapels round a cathedral apse ; and clustered them round the clay ; and conquered it again. At last the clay came on at his summit, and tried to blunt his summit ; but he could not endure that for an instant ; and left his flanks all rough, but pure ; and fought the clay at his crest, and built crest over crest, and peak over peak, till the clay surrendered at last ; and here is his summit, smooth and pure, terminating a pyramid of alternate clay and crystal, half a foot high !

LILY. Oh, how nice of him ! What a dear, brave crystal ! But I can't bear to see his flanks all broken, and the clay within them.

L. Yes ; it was an evil chance for him, the being born to such contention ; there are some enemies so base that even to hold them captive is a kind of dishonour. But look, here has been quite a different kind of struggle : the adverse power has been more orderly, and has fought the pure crystal in ranks as firm as its own. This is not mere rage and impediment of crowded evil : here is a disciplined hostility ; army against army.

LILY. Oh, but this is much more beautiful !

L. Yes, for both the elements have true virtue in them ; it is a pity they are at war, but they war grandly.

MARY. But is this the same clay as in the other crystal ?

L. I used the word clay for shortness. In both, the enemy is really limestone ; but in the first, disordered, and mixed with true clay ; while, here, it is nearly pure, and crystallises into its own primitive form, the oblique six-sided one, which you know : and out of these it makes regiments ; and then

squares of the regiments, and so charges the rock crystal literally in square against column.

ISABEL. Please, please, let me see. And what does the rock crystal do?

L. The rock crystal seems able to do nothing. The calcite cuts it through at every charge. Look here,—and here! The loveliest crystal in the whole group is hewn fairly into two pieces.

ISABEL. Oh, dear; but is the calcite harder than the crystal then?

L. No, softer. Very much softer.

MARY. But then, how can it possibly cut the crystal?

L. It did not really cut it, though it passes through it. The two were formed together, as I told you; but no one knows how. Still, it is strange that this hard quartz has in all cases a good-natured way with it, of yielding to everything else. All sorts of soft things make nests for themselves in it; and it never makes a nest for itself in anything. It has all the rough outside work; and every sort of cowardly and weak mineral can shelter itself within it. Look; these are hexagonal plates of mica; if they were outside of this crystal they would break, like burnt paper; but they are inside of it,—nothing can hurt them,—the crystal has taken them into its very heart, keeping all their delicate edges as sharp as if they were under water, instead of bathed in rock. Here is a piece of branched silver: you can bend it with a touch of your finger, but the stamp of its every fibre is on the rock in which it lay, as if the quartz had been as soft as wool.

LILY. Oh, the good, good quartz! But does it never get inside of anything?

L. As it is a little Irish girl who asks, I may perhaps answer, without being laughed at, that it gets inside of itself sometimes. But I don't remember seeing quartz make a nest for itself in anything else.

ISABEL. Please, there was something I heard you talking about, last term, with Miss Mary. I was at my lessons, but I heard something about nests; and I thought it was birds'

ness; and I couldn't help listening; and then, I remember, it was about 'nests of quartz in granite.' I remember, because I was so disappointed!

L. Yes, mousie, you remember quite rightly; but I can't tell you about those nests to-day, nor perhaps to-morrow: but there's no contradiction between my saying then, and now; I will show you that there is not, some day. Will you trust me meanwhile?

ISABEL. Won't I!

L. Well, then, look, lastly, at this piece of courtesy in quartz; it is on a small scale, but wonderfully pretty. Here is nobly born quartz living with a green mineral, called epidote; and they are immense friends. Now, you see, a comparatively large and strong quartz-crystal, and a very weak and slender little one of epidote, have begun to grow, close by each other, and sloping unluckily towards each other, so that they at last meet. They cannot go on growing together; the quartz crystal is five times as thick, and more than twenty times as strong,* as the epidote; but he stops at once, just in the very crowning moment of his life, when he is building his own summit! He lets the pale little film of epidote grow right past him; stopping his own summit for it; and he never himself grows any more.

LILY (*after some silence of wonder*). But is the quartz never wicked then?

L. Yes, but the wickedest quartz seems good-natured, compared to other things. Here are two very characteristic examples; one is good quartz, living with good pearlspar, and the other, wicked quartz, living with wicked pearlspar. In both, the quartz yields to the soft carbonate of iron: but, in the first place, the iron takes only what it needs of room; and is inserted into the planes of the rock crystal with such precision, that you must break it away before you can tell whether it really penetrates the quartz or not; while the crystals of iron are perfectly formed, and have a lovely bloom on their surface besides. But here, when the two minerals

* Quartz is not much harder than epidote; the strength is only supposed to be in some proportion to the squares of the diameters.

quarrel, the unhappy quartz has all its surfaces jagged and torn to pieces ; and there is not a single iron crystal whose shape you can completely trace. But the quartz has the worst of it, in both instances.

VIOLET. Might we look at that piece of broken quartz again, with the weak little film across it? it seems such a strange lovely thing, like the self-sacrifice of a human being.

L. The self-sacrifice of a human being is not a lovely thing, Violet. It is often a necessary and noble thing ; but no form nor degree of suicide can be ever lovely.

VIOLET. But self-sacrifice is not suicide!

L. What is it then?

VIOLET. Giving up one's self for another.

L. Well ; and what do you mean by 'giving up one's self?'

VIOLET. Giving up one's tastes, one's feelings, one's time, one's happiness, and so on, to make others happy.

L. I hope you will never marry anybody, Violet, who expects you to make him happy in that way.

VIOLET (*hesitating*). In what way?

L. By giving up your tastes, and sacrificing your feelings, and happiness.

VIOLET. No, no, I don't mean that ; but you know, for other people, one must.

L. For people who don't love you, and whom you know nothing about? Be it so ; but how does this 'giving up' differ from suicide then?

VIOLET. Why, giving up one's pleasures is not killing one's self?

L. Giving up wrong pleasure is not ; neither is it self-sacrifice, but self-culture. But giving up right pleasure is. If you surrender the pleasure of walking, your foot will wither ; you may as well cut it off : if you surrender the pleasure of seeing, your eyes will soon be unable to bear the light ; you may as well pluck them out. And to maim yourself is partly to kill yourself. Do but go on maiming, and you will soon slay.

VIOLET. But why do you make me think of that verse then, about the foot and the eye?

L. You are indeed commanded to cut off and to pluck out, if foot or eye offend you ; but why *should* they offend you ?

VIOLET. I don't know ; I never quite understood that.

L. Yet it is a sharp order ; one needing to be well understood if it is to be well obeyed ! When Helen sprained her ankle the other day, you saw how strongly it had to be bandaged : that is to say, prevented from all work, to recover it. But the bandage was not 'lovely.'

VIOLET. No, indeed.

L. And if her foot had been crushed, or diseased, or snake-bitten, instead of sprained, it might have been needful to cut it off. But the amputation would not have been 'lovely.'

VIOLET. No.

L. Well, if eye and foot are dead already, and betray you—if the light that is in you be darkness, and your feet run into mischief, or are taken in the snare,—it is indeed time to pluck out, and cut off, I think : but, so crippled, you can never be what you might have been otherwise. You enter into life, at best, halt or maimed ; and the sacrifice is not beautiful, though necessary.

VIOLET (*after a pause*). But when one sacrifices one's self for others ?

L. Why not rather others for you ?

VIOLET. Oh ! but I couldn't bear that.

L. Then why should they bear it ?

DORA (*bursting in, indignant*). And Thermopylæ, and Protesilaus, and Marcus Curtius, and Arnold de Winkelried, and Iphigenia, and Jephthah's daughter ?

L. (*sustaining the indignation unmoved*). And the Samaritan woman's son ?

DORA. Which Samaritan woman's ?

L. Read 2 Kings vi. 29.

DORA (*obeys*). How horrid ! As if we meant anything like that !

L. You don't seem to me to know in the least what you do mean, children. What practical difference is there between 'that,' and what you are talking about ? The Samaritan children had no voice of their own in the business, it is true ; but

neither had Iphigenia: the Greek girl was certainly neither boiled, nor eaten; but that only makes a difference in the dramatic effect; not in the principle.

DORA (*biting her lip*). Well, then, tell us what we ought to mean. As if you didn't teach it all to us, and mean it yourself, at this moment, more than we do, if you wouldn't be tiresome!

L. I mean, and have always meant, simply this, Dora;—that the will of God respecting us is that we shall live by each other's happiness, and life; not by each other's misery, or death. I made you read that verse which so shocked you just now, because the relations of parent and child are typical of all beautiful human help. A child may have to die for its parents; but the purpose of Heaven is that it shall rather live for them;—that, not by its sacrifice, but by its strength, its joy, its force of being, it shall be to them renewal of strength; and as the arrow in the hand of the giant. So it is in all other right relations. Men help each other by their joy, not by their sorrow. They are not intended to slay themselves for each other, but to strengthen themselves for each other. And among the many apparently beautiful things which turn, through mistaken use, to utter evil, I am not sure but that the thoughtlessly meek and self-sacrificing spirit of good men must be named as one of the fatallest. They have so often been taught that there is a virtue in mere suffering, as such; and foolishly to hope that good may be brought by Heaven out of all on which Heaven itself has set the stamp of evil, that we may avoid it,—that they accept pain and defeat as if these were their appointed portion; never understanding that their defeat is not the less to be mourned because it is more fatal to their enemies than to them. The one thing that a good man has to do, and to see done, is justice; he is neither to slay himself nor others causelessly: so far from denying himself, since he is pleased by good, he is to do his utmost to get his pleasure accomplished. And I only wish there were strength, fidelity, and sense enough, among the good Englishmen of this day, to render it possible for them to band together in a vowed brotherhood, to enforce, by strength of

heart and hand, the doing of human justice among all who came within their sphere. And finally, for your own teaching, observe, although there may be need for much self-sacrifice and self-denial in the correction of faults of character, the moment the character is formed, the self-denial ceases. Nothing is really well done, which it costs you pain to do.

VIOLET. But surely, sir, you are always pleased with us when we try to please others, and not ourselves?

L. My dear child, in the daily course and discipline of right life, we must continually and reciprocally submit and surrender in all kind and courteous and affectionate ways : and these submissions and ministries to each other, of which you all know (none better) the practice and the preciousness, are as good for the yielder as the receiver : they strengthen and perfect as much as they soften and refine. But the real sacrifice of all our strength, or life, or happiness to others (though it may be needed, and though all brave creatures hold their lives in their hand, to be given, when such need comes, as frankly as a soldier gives his life in battle), is yet always a mournful and momentary necessity ; not the fulfilment of the continuous law of being. Self-sacrifice which is sought after, and triumphed in, is usually foolish ; and calamitous in its issue : and by the sentimental proclamation and pursuit of it, good people have not only made most of their own lives useless, but the whole framework of their religion so hollow, that at this moment, while the English nation, with its lips, pretends to teach every man to 'love his neighbour as himself,' with its hands and feet it clutches and tramples like a wild beast ; and practically lives, every soul of it that can, on other people's labour. Briefly, the constant duty of every man to his fellows is to ascertain his own powers and special gifts ; and to strengthen them for the help of others. Do you think Titian would have helped the world better by denying himself, and not painting ; or Casella by denying himself, and not singing ? The real virtue is to be ready to sing the moment people ask us ; as he was, even in purgatory. The very word 'virtue' means not 'conduct' but 'strength,' vital energy in the heart. Were not you reading about that group of words

beginning with V,—vital, virtuous, vigorous, and so on,—in Max Muller, the other day, Sibyl? Can't you tell the others about it?

SIBYL. No, I can't; will you tell us, please?

L. Not now, it is too late. Come to me some idle time to-morrow, and I'll tell you about it, if all's well. But the gist of it is, children, that you should at least know two Latin words; recollect that 'mors' means death and delaying; and 'vita' means life and growing: and try always, not to mortify yourselves, but to vivify yourselves.

VIOLET. But, then, are we not to mortify our earthly affections? and surely we are to sacrifice ourselves, at least in God's service, if not in man's?

L. Really, Violet, we are getting too serious. I've given you enough ethics for one talk, I think! Do let us have a little play. Lily, what were you so busy about, at the ant-hill in the wood, this morning?

LILY. Oh, it was the ants who were busy, not I; I was only trying to help them a little.

L. And they wouldn't be helped, I suppose?

LILY. No, indeed. I can't think why ants are always so tiresome, when one tries to help them! They were carrying bits of stick, as fast as they could, through a piece of grass; and pulling and pushing, so hard; and tumbling over and over,—it made one quite pity them; so I took some of the bits of stick, and carried them forward a little, where I thought they wanted to put them; but instead of being pleased, they left them directly, and ran about looking quite angry and frightened; and at last ever so many of them got up my sleeves, and bit me all over, and I had to come away.

L. I couldn't think what you were about. I saw your French grammar lying on the grass behind you, and thought perhaps you had gone to ask the ants to hear you a French verb.

ISABEL. Ah! but you didn't, though!

L. Why not, Isabel? I knew, well enough, Lily couldn't learn that verb by herself.

ISABEL. No; but the ants couldn't help her.

L. Are you sure the ants could not have helped you, Lily?

LILY (*thinking*). I ought to have learned something from them, perhaps.

L. But none of them left their sticks to help you through the irregular verb?

LILY. No, indeed. (*Laughing, with some others.*)

L. What are you laughing at, children? I cannot see why the ants should not have left their tasks to help Lily in her's, —since here is Violet thinking she ought to leave *her* tasks, to help God in His. Perhaps, however, she takes Lily's more modest view, and thinks only that 'He ought to learn something from her.'

(*Tears in VIOLET's eyes.*)

DORA (*scarlet*). It's too bad—it's a shame :—poor Violet!

L. My dear children, there's no reason why one should be so red, and the other so pale, merely because you are made for a moment to feel the absurdity of a phrase which you have been taught to use, in common with half the religious world. There is but one way in which man can ever help God—that is, by letting God help him : and there is no way in which his name is more guiltily taken in vain, than by calling the abandonment of our own work, the performance of His.

God is a kind Father. He sets us all in the places where He wishes us to be employed ; and that employment is truly 'our Father's business.' He chooses work for every creature which will be delightful to them, if they do it simply and humbly. He gives us always strength enough, and sense enough, for what He wants us to do ; if we either tire ourselves or puzzle ourselves, it is our own fault. And we may always be sure, whatever we are doing, that we cannot be pleasing Him, if we are not happy ourselves. Now, away with you, children ; and be as happy as you can. And when you cannot, at least don't plume yourselves upon pouting.

LECTURE VII.

HOME VIRTUES.

By the fireside, in the Drawing-room. Evening.

DORA. Now, the curtains are drawn, and the fire's bright, and here's your arm-chair—and you're to tell us all about what you promised.

L. All about what?

DORA. All about virtue.

KATHLEEN. Yes, and about the words that begin with V.

L. I heard you singing about a word that begins with V, in the playground, this morning, Miss Katie.

KATHLEEN. Me singing?

MAY. Oh tell us—tell us.

L. 'Vilikens and his——'

KATHLEEN (*stopping his mouth*). Oh! please don't. Where were you?

ISABEL. I'm sure I wish I had known where he was! We lost him among the rhododendrons, and I don't know where he got to; oh, you naughty—naughty—(*climbs on his knee*).

DORA. Now, Isabel, we really want to talk.

L. I don't.

DORA. Oh, but you must. You promised, you know.

L. Yes, if all was well; but all's ill. I'm tired, and cross; and I won't.

DORA. You're not a bit tired, and you're not crosser than two sticks; and we'll make you talk, if you were crosser than six. Come here, Egypt; and get on the other side of him.

(EGYPT *takes up a commanding position near the hearth-brush.*)

DORA (*reviewing her forces*). Now, Lily, come and sit on the rug in front.

(LILY *does as she is bid.*)

L. (*seeing he has no chance against the odds.*) Well, well ; but I'm really tired. Go and dance a little, first ; and let me think.

DORA. No ; you mustn't think. You will be wanting to make us think next ; that will be tiresome.

L. Well, go and dance first, to get quit of thinking ; and then I'll talk as long as you like.

DORA. Oh, but we can't dance to-night. There isn't time ; and we wan't to hear about virtue.

L. Let me see a little of it first. Dancing is the first of girl's virtues.

EGYPT. Indeed ! And the second ?

L. Dressing.

EGYPT. Now, you needn't say that ! I mended that tear the first thing before breakfast this morning.

L. I cannot otherwise express the ethical principle, Egypt ; whether you have mended your gown or not.

DORA. Now don't be tiresome. We really must hear about virtue, please ; seriously.

L. Well. I'm telling you about it, as fast as I can.

DORA. What ! the first of girls' virtues is dancing ?

L. More accurately, it is wishing to dance, and not wishing to tease, nor hear about virtue.

DORA (*to EGYPT*). Isn't he cross ?

EGYPT. How many balls must we go to in the season, to be perfectly virtuous ?

L. As many as you can without losing your colour. But I did not say you should wish to go to balls. I said you should be always wanting to dance.

EGYPT. So we do ; but everybody says it is very wrong.

L. Why, Egypt, I thought—

'There was a lady once,
That would not be a queen,—that would she not,
For all the mud in Egypt.'

You were complaining the other day of having to go out a great deal oftener than you liked.

EGYPT. Yes, so I was ; but then, it isn't to dance. There's no room to dance : it's—(*Pausing to consider what it is for*).

L. It is only to be seen, I suppose. Well, there's no harm in that. Girls ought to like to be seen.

DORA (*her eyes flashing*). Now, you don't mean that ; and you're too provoking ; and we won't dance again, for a month.

L. It will answer every purpose of revenge, Dora, if you only banish me to the library ; and dance by yourselves : but I don't think Jessie and Lily will agree to that. You like me to see you dancing, don't you Lily ?

LILY. Yes, certainly,—when we do it rightly.

L. And besides, Miss Dora, if young ladies really do not want to be seen, they should take care not to let their eyes flash when they dislike what people say : and, more than that, it is all nonsense from beginning to end, about not wanting to be seen. I don't know any more tiresome flower in the borders than your especially 'modest' snowdrop ; which one always has to stoop down and take all sorts of tiresome trouble with, and nearly break its poor little head off, before you can see it ; and then, half of it is not worth seeing. Girls should be like daisies ; nice and white, with an edge of red, if you look close ; making the ground bright wherever they are ; knowing simply and quietly that they do it, and are meant to do it, and that it would be very wrong if they didn't do it. Not want to be seen, indeed ! How long were you in doing your back hair, this afternoon, Jessie ?

(JESSIE not immediately answering, DORA comes to her assistance.)

DORA. Not above three-quarters of an hour, I think, Jess ?

JESSIE (*putting her finger up*). Now, Dorothy, you needn't talk, you know !

L. I know she needn't, Jessie ; I shall ask her about those dark plaits presently. (*DORA looks round to see if there is any way open for retreat.*) But never mind ; it was worth the time, whatever it was ; and nobody will ever mistake that golden wreath for a chignon : but if you don't want it to be seen, you had better wear a cap.

JESSIE. Ah, now, are you really going to do nothing but play? And we all have been thinking, and thinking, all day; and hoping you would tell us things; and now—!

L. And now I am telling you things, and true things, and things good for you; and you won't believe me. You might as well have let me go to sleep at once, as I wanted to.

(Endeavours again to make himself comfortable.)

ISABEL. Oh, no, no, you sha'n't go to sleep, you naughty—Kathleen, come here.

L. *(knowing what he has to expect if KATHLEEN comes)*. Get away, Isabel, you're too heavy. *(Sitting up.)* What have I been saying?

DORA. I do believe he has been asleep all the time! You never heard anything like the things you've been saying.

L. Perhaps not. If you have heard them, and anything like them, it is all I want.

EGYPT. Yes, but we don't understand, and you know we don't; and we want to.

L. What did I say first?

DORA. That the first virtue of girls was wanting to go to balls.

L. I said nothing of the kind.

JESSIE. 'Always wanting to dance,' you said.

L. Yes, and that's true. Their first virtue is to be intensely happy;—so happy that they don't know what to do with themselves for happiness,—and dance, instead of walking. Don't you recollect 'Louisa,'

'No fountain from a rocky cave
E'er tripped with foot so free;
She seemed as happy as a wave
That dances on the sea.'

A girl is always like that, when everything's right with her.

VIOLET. But, surely, one must be sad sometimes?

L. Yes, Violet; and dull sometimes, and stupid sometimes, and cross sometimes. What must be, must; but it is always

either our own fault, or somebody else's. The last and worst thing that can be said of a nation is, that it has made its young girls sad, and weary.

MAY. But I am sure I have heard a great many good people speak against dancing?

L. Yes, May; but it does not follow they were wise as well as good. I suppose they think Jeremiah liked better to have to write Lamentations for his people, than to have to write that promise for them, which everybody seems to hurry past, that they may get on quickly to the verse about Rachel weeping for her children; though the verse they pass is the counter-blessing to that one: 'Then shall the virgin rejoice in the dance; and both young men and old together; and I will turn their mourning into joy.'

(The children get very serious, but look at each other, as if pleased.)

MARY. They understand now: but, do you know what you said next?

L. Yes; I was not more than half asleep. I said their second virtue was dressing.

MARY. Well! what did you mean by that?

L. What do *you* mean by dressing?

MARY. Wearing fine clothes.

L. Ah! there's the mistake. I mean wearing plain ones.

MARY. Yes, I daresay! but that's not what girls understand by dressing, you know.

L. I can't help that. If they understand by dressing, buying dresses, perhaps they also understand by drawing, buying pictures. But when I hear them say they can draw, I understand that they can make a drawing; and when I hear them say they can dress, I understand that they can make a dress and—which is quite as difficult—wear one.

DORA. I'm not sure about the making; for the wearing, we can all wear them—out, before anybody expects it.

EGYPT *(aside, to L., piteously)*. Indeed I have mended that torn flounce quite neatly; look if I haven't!

L. *(aside, to EGYPT)*. All right; don't be afraid. *(Aloud to*

DORA.) Yes, doubtless ; but you know that is only a slow way of undressing.

DORA. Then, we are all to learn dress-making, are we ?

L. Yes ; and always to dress yourselves beautifully—not finely, unless on occasion ; but then very finely and beautifully too. Also, you are to dress as many other people as you can ; and to teach them how to dress, if they don't know ; and to consider every ill-dressed woman or child whom you see anywhere, as a personal disgrace ; and to get at them, somehow, until everybody is as beautifully dressed as birds.

(Silence ; the children drawing their breaths hard, as if they had come from under a shower bath.)

L *(seeing objections begin to express themselves in the eyes)*. Now you needn't say you can't ; for you can : and it's what you were meant to do, always ; and to dress your houses, and your gardens, too ; and to do very little else, I believe, except singing ; and dancing, as we said, of course ; and—one thing more.

DORA. Our third and last virtue, I suppose ?

L. Yes ; on Violet's system of triplicities.

DORA. Well, we are prepared for anything now. What is it ?

L. Cooking.

DORA. Cardinal, indeed ! If only Beatrice were here with her seven handmaids, that she might see what a fine eighth we had found for her !

MARY. And the interpretation ? What does 'cooking' mean ?

L. It means the knowledge of Medea, and of Circe, and of Calypso, and of Helen, and of Rebekah, and of the Queen of Sheba. It means the knowledge of all herbs, and fruits, and balms, and spices ; and of all that is healing and sweet in fields and groves, and savoury in meats ; it means carefulness, and inventiveness, and watchfulness, and willingness, and readiness of appliance ; it means the economy of your great-grandmothers, and the science of modern chemists ; it means much tasting, and no wasting ; it means English thoroughness, and French art, and Arabian hospitality ; and it means, in fine, that you are to be perfectly and always,

'ladies'—'loaf-givers;' and, as you are to see, imperatively, that everybody has something pretty to put on,—so you are to see, yet more imperatively, that everybody has something nice to eat.

(Another pause, and long drawn breath.)

DORA *(slowly recovering herself)* to EGYPT. We had better have let him go to sleep, I think, after all!

L. You had better let the younger ones go to sleep now: for I haven't half done.

ISABEL *(panic-struck)*. Oh! please, please! just one quarter of an hour.

L. No, Isabel; I cannot say what I've got to say, in a quarter of an hour; and it is too hard for you, besides:—you would be lying awake, and trying to make it out, half the night. That will never do.

ISABEL. Oh, please!

L. It would please me exceedingly, mousie: but there are times when we must both be displeased; more's the pity. Lily may stay for half an hour, if she likes.

LILY. I can't; because Isey never goes to sleep, if she is waiting for me to come.

ISABEL. Oh, yes, Lily; I'll go to sleep to-night, I will, indeed.

LILY. Yes, it's very likely, Isey, with those fine round eyes! *(To L.)* You'll tell me something of what you've been saying, to-morrow, won't you?

L. No, I won't, Lily. You must choose. It's only in Miss Edgeworth's novels that one can do right, and have one's cake and sugar afterwards, as well (not that I consider the dilemma, to-night, so grave).

(LILY, sighing, takes ISABEL's hand.)

Yes, Lily dear, it will be better, in the outcome of it, so, than if you were to hear all the talks that ever were talked, and all the stories that ever were told. Good night.

(The door leading to the condemned cells of the Dormitory closes on LILY, ISABEL, FLORRIE, and other diminutives and submissive victims.)

JESSIE (*after a pause*). Why, I thought you were so fond of Miss Edgeworth!

L. So I am; and so you ought all to be. I can read her over and over again, without ever tiring; there's no one whose every page is so full, and so delightful; no one who brings you into the company of pleasanter or wiser people; no one who tells you more truly how to do right. And it is very nice, in the midst of a wild world, to have the very ideal of poetical justice done always to one's hand:—to have everybody found out, who tells lies; and everybody decorated with a red riband, who doesn't; and to see the good Laura, who gave away her half sovereign, receiving a grand ovation from an entire dinner party disturbed for the purpose; and poor, dear, little Rosamond, who chooses purple jars instead of new shoes, left at last without either her shoes or her bottle. But it isn't life: and, in the way children might easily understand it, it isn't morals.

JESSIE. How do you mean we might understand it?

L. You might think Miss Edgeworth meant that the right was to be done mainly because one was always rewarded for doing it. It is an injustice to her to say that: her heroines always do right simply for its own sake, as they should; and her examples of conduct and motive are wholly admirable. But her representation of events is false and misleading. Her good characters never are brought into the deadly trial of goodness,—the doing right, and suffering for it, quite finally. And that is life, as God arranges it. 'Taking up one's cross' does not at all mean having ovations at dinner parties, and being put over everybody else's head.

DORA. But what *does* it mean then? That is just what we couldn't understand, when you were telling us about not sacrificing ourselves, yesterday.

L. My dear, it means simply that you are to go the road which you see to be the straight one; carrying whatever you find is given you to carry, as well and stoutly as you can; without making faces, or calling people to come and look at you. Above all, you are neither to load, nor unload, yourself; nor cut your cross to your own liking. Some people

think it would be better for them to have it large ; and many, that they could carry it much faster if it were small ; and even those who like it largest are usually very particular about its being ornamental, and made of the best ebony. But all that you have really to do is to keep your back as straight as you can ; and not think about what is upon it—above all, not to boast of what is upon it. The real and essential meaning of ‘virtue’ is in that straightness of back. Yes ; you may laugh, children, but it is. You know I was to tell about the words that began with V. Sibyl, what does ‘virtue’ mean, literally ?

SIBYL. Does it mean courage ?

L. Yes ; but a particular kind of courage. It means courage of the nerve ; vital courage. That first syllable of it, if you look in Max Müller, you will find really means ‘nerve,’ and from it come ‘vis,’ and ‘vir,’ and ‘virgin’ (through vi-reo), and the connected word ‘virga’—‘a rod ;’—the green rod, or springing bough of a tree, being the type of perfect human strength, both in the use of it in the Mosaic story, when it becomes a serpent, or strikes the rock ; or when Aaron’s bears its almonds ; and in the metaphorical expressions, the ‘Rod out of the stem of Jesse,’ and the ‘Man whose name is the Branch,’ and so on. And the essential idea of real virtue is that of a vital human strength, which instinctively, constantly, and without motive, does what is right. You must train men to this by habit, as you would the branch of a tree ; and give them instincts and manners (or morals) of purity, justice, kindness, and courage. Once rightly trained, they act as they should, irrespectively of all motive, of fear, or of reward. It is the blackest sign of putrescence in a national religion, when men speak as if it were the only safeguard of conduct ; and assume that, but for the fear of being burned, or for the hope of being rewarded, everybody would pass their lives in lying, stealing, and murdering. I think quite one of the notablest historical events of this century (perhaps the very notablest), was that council of clergymen, horror-struck at the idea of any diminution in our dread of hell, at which the last of English

clergymen whom one would have expected to see in such a function, rose as the devil's advocate ; to tell us how impossible it was we could get on without him.

VIOLET (*after a pause*). But, surely, if people weren't afraid—(*hesitates again*).

L. They should be afraid of doing wrong, and of that only, my dear. Otherwise, if they only don't do wrong for fear of being punished, they *have* done wrong in their hearts, already.

VIOLET. Well, but surely, at least one ought to be afraid of displeasing God ; and one's desire to please Him should be one's first motive ?

L. He never would be pleased with us, if it were, my dear. When a father sends his son out into the world—suppose as an apprentice—fancy the boy's coming home at night, and saying, 'Father, I could have robbed the till to-day ; but I didn't, because I thought you wouldn't like it.' Do you think the father would be particularly pleased ?

(VIOLET *is silent*.)

He would answer, would he not, if he were wise and good, 'My boy, though you had no father, you must not rob tills' ? And nothing is ever done so as really to please our Great Father, unless we would also have done it, though we had had no Father to know of it.

VIOLET (*after long pause*). But, then, what continual threatenings, and promises of reward there are !

L. And how vain both ! with the Jews, and with all of us. But the fact is, that the threat and promise are simply statements of the Divine law, and of its consequences. The fact is truly told you,—make what use you may of it : and as collateral warning, or encouragement, or comfort, the knowledge of future consequences may often be helpful to us ; but helpful chiefly to the better state when we can act without reference to them. And there's no measuring the poisoned influence of that notion of future reward on the mind of Christian Europe, in the early ages. Half the monastic system rose out of that, acting on the occult pride and ambition

of good people (as the other half of it came of their follies and misfortunes). There is always a considerable quantity of pride, to begin with, in what is called 'giving one's self to God.' As if one had ever belonged to anybody else!

DORA. But, surely, great good has come out of the monastic system—our books,—our sciences—all saved by the monks?

L. Saved from what, my dear? From the abyss of misery and ruin which that false Christianity allowed the whole active world to live in. When it had become the principal amusement, and the most admired art, of Christian men, to cut one another's throats, and burn one another's towns; of course the few feeble or reasonable persons left, who desired quiet, safety, and kind fellowship, got into cloisters; and the gentlest, thoughtfulest, noblest men and women shut themselves up, precisely where they could be of least use. They are very fine things, for us painters, now,—the towers and white arches upon the tops of the rocks; always in places where it takes a day's climbing to get at them; but the intense tragi-comedy of the thing, when one thinks of it, is unspeakable. All the good people of the world getting themselves hung up out of the way of mischief, like Bailie Nicol Jarvie;—poor little lambs, as it were, dangling there for the sign of the Golden Fleece; or like Socrates in his basket in the 'Clouds'! (I must read you that bit of Aristophanes again, by the way.) And believe me, children, I am no warped witness, as far as regards monasteries; or if I am, it is in their favour. I have always had a strong leaning that way; and have pensively shivered with Augustines at St. Bernard; and happily made hay with Franciscans at Fesolé; and sat silent with Carthusians in their little gardens, south of Florence; and mourned through many a day-dream, at Melrose and Bolton. But the wonder is always to me, not how much, but how little, the monks have, on the whole, done, with all that leisure, and all that good-will! What nonsense monks characteristically wrote;—what little progress they made in the sciences to which they devoted themselves as a duty,—medicine especially;—and, last and worst, what depths of degradation they can sometimes see one another,

and the population round them, sink into ; without either doubting their system, or reforming it !

(*Seeing questions rising to lips.*) Hold your little tongues, children ; it's very late, and you'll make me forget what I've to say. Fancy yourselves in pews, for five minutes. There's one point of possible good in the conventual system, which is always attractive to young girls ; and the idea is a very dangerous one ;—the notion of a merit, or exalting virtue, consisting in a habit of meditation on the 'things above,' or things of the next world. Now it is quite true, that a person of beautiful mind, dwelling on whatever appears to them most desirable and lovely in a possible future will not only pass their time pleasantly, but will even acquire, at last, a vague and wildly gentle charm of manner and feature, which will give them an air of peculiar sanctity in the eyes of others. Whatever real or apparent good there may be in this result, I want you to observe, children, that we have no real authority for the reveries to which it is owing. We are told nothing distinctly of the heavenly world ; except that it will be free from sorrow, and pure from sin. What is said of pearl gates, golden floors, and the like, is accepted as merely figurative by religious enthusiasts themselves ; and whatever they pass their time in conceiving, whether of the happiness of risen souls, of their intercourse, or of the appearance and employment of the heavenly powers, is entirely the product of their own imagination ; and as completely and distinctly a work of fiction, or romantic invention, as any novel of Sir Walter Scott's. That the romance is founded on religious theory or doctrine ;—that no disagreeable or wicked persons are admitted into the story ;—and that the inventor fervently hopes that some portion of it may hereafter come true, does not in the least alter the real nature of the effort or enjoyment.

Now, whatever indulgence may be granted to amiable people for pleasing themselves in this innocent way, it is beyond question, that to seclude themselves from the rough duties of life, merely to write religious romances, or, as in most cases, merely to dream them, without taking so much

trouble as is implied in writing, ought not to be received as an act of heroic virtue. But, observe, even in admitting thus much, I have assumed that the fancies are just and beautiful, though fictitious. Now, what right have any of us to assume that our own fancies will assuredly be either the one or the other? That they delight us, and appear lovely to us, is no real proof of its not being wasted time to form them : and we may surely be led somewhat to distrust our judgment of them by observing what ignoble imaginations have sometimes sufficiently, or even enthusiastically, occupied the hearts of others. The principal source of the spirit of religious contemplation is the East ; now I have here in my hand a Byzantine image of Christ, which, if you will look at it seriously, may, I think, at once and for ever render you cautious in the indulgence of a merely contemplative habit of mind. Observe, it is the fashion to look at such a thing only as a piece of barbarous art ; that is the smallest part of its interest. What I want you to see, is the baseness and falseness of a religious state of enthusiasm, in which such a work could be dwelt upon with pious pleasure. That a figure, with two small round black beads for eyes ; a gilded face, deep cut into horrible wrinkles ; an open gash for a mouth, and a distorted skeleton for a body, wrapped about, to make it fine, with striped enamel of blue and gold ;—that such a figure, I say, should ever have been thought helpful towards the conception of a Redeeming Deity, may make you, I think, very doubtful, even of the Divine approval,—much more of the Divine inspiration,—of religious reverie in general. You feel, doubtless, that your own idea of Christ would be something very different from this ; but in what does the difference consist? Not in any more divine authority in your imagination ; but in the intellectual work of six intervening centuries ; which, simply, by artistic discipline, has refined this crude conception for you, and filled you, partly with an innate sensation, partly with an acquired knowledge, of higher forms,—which render this Byzantine crucifix as horrible to you, as it was pleasing to its maker. More is required to excite your fancy ; but your fancy is of

no more authority than his was : and a point of national art-skill is quite conceivable, in which the best we can do now will be as offensive to the religious dreamers of the more highly cultivated time, as this Byzantine crucifix is to you.

MARY. But surely, Angelico will always retain his power over everybody ?

L. Yes, I should think, always ; as the gentle words of a child will : but you would be much surprised, Mary, if you thoroughly took the pains to analyse, and had the perfect means of analysing, that power of Angelico,—to discover its real sources. Of course it is natural, at first, to attribute it to the pure religious fervour by which he was inspired ; but do you suppose Angelico was really the only monk, in all the Christian world of the middle ages, who laboured, in art, with a sincere religious enthusiasm ?

MARY. No, certainly not.

L. Anything more frightful, more destructive of all religious faith whatever, than such a supposition, could not be. And yet, what other monk ever produced such work ? I have myself examined carefully upwards of two thousand illuminated missals, with especial view to the discovery of any evidence of a similar result upon the art, from the monkish devotion ; and utterly in vain.

MARY. But then, was not Fra Angelico a man of entirely separate and exalted genius ?

L. Unquestionably ; and granting him to be that, the peculiar phenomenon in his art is, to me, not its loveliness, but its weakness. The effect of ‘inspiration,’ had it been real, on a man of consummate genius, should have been, one would have thought, to make everything that he did faultless and strong, no less than lovely. But of all men, deserving to be called ‘great,’ Fra Angelico permits to himself the least pardonable faults, and the most palpable follies. There is evidently within him a sense of grace, and power of invention, as great as Ghiberti’s :—we are in the habit of attributing those high qualities to his religious enthusiasm ; but, if they were produced by that enthusiasm in him, they ought to be produced by the same feelings in others ; and we see they

are not. Whereas, comparing him with contemporary great artists, of equal grace and invention, one peculiar character remains notable in him—which, logically, we ought therefore to attribute to the religious fervour ;—and that distinctive character is, the contented indulgence of his own weaknesses, and perseverance in his own ignorances.

MARY. But that's dreadful ! And what is the source of the peculiar charm which we all feel in his work ?

L. There are many sources of it, Mary ; united and seeming like one. You would never feel that charm but in the work of an entirely good man ; be sure of that ; but the goodness is only the recipient and modifying element, not the creative one. Consider carefully what delights you in any original picture of Angelico's. You will find, for one minor thing, an exquisite variety and brightness of ornamental work. That is not Angelico's inspiration. It is the final result of the labour and thought of millions of artists, of all nations ; from the earliest Egyptian potters downwards—Greeks, Byzantines, Hindoos, Arabs, Gauls, and Northmen—all joining in the toil ; and consummating it in Florence, in that century, with such embroidery of robe and inlaying of armour as had never been seen till then ; nor, probably, ever will be seen more. Angelico merely takes his share of this inheritance, and applies it in the tenderest way to subjects which are peculiarly acceptant of it. But the inspiration, if it exist anywhere, flashes on the knight's shield quite as radiantly as on the monk's picture. Examining farther into the sources of your emotion in the Angelico work, you will find much of the impression of sanctity dependent on a singular repose and grace of gesture, consummating itself in the floating, flying, and above all, in the dancing groups. That is not Angelico's inspiration. It is only a peculiarly tender use of systems of grouping which had been long before developed by Giotto, Memmi, and Orcagna ; and the real root of it all is simply—What do you think, children ? The beautiful dancing of the Florentine maidens !

DORA (*indignant again*). Now, I wonder what next ! Why not say it all depended on Herodias' daughter, at once ?

L. Yes ; it is certainly a great argument against singing, that there were once sirens.

DORA. Well, it may be all very fine and philosophical, but shouldn't I just like to read you the end of the second volume of 'Modern Painters' !

L. My dear, do you think any teacher could be worth your listening to, or anybody else's listening to, who had learned nothing, and altered his mind in nothing, from seven and twenty to seven and forty ? But that second volume is very good for you as far as it goes. It is a great advance, and a thoroughly straight and swift one, to be led, as it is the main business of that second volume to lead you, from Dutch cattle pieces, and ruffian-pieces, to Fra Angelico. And it is right for you also, as you grow older, to be strengthened in the general sense and judgment which may enable you to distinguish the weaknesses from the virtues of what you love : else you might come to love both alike ; or even the weaknesses without the virtues. You might end by liking Overbeck and Cornelius as well as Angelico. However, I have perhaps been leaning a little too much to the merely practical side of things, in to-night's talk ; and you are always to remember, children, that I do not deny, though I cannot affirm, the spiritual advantages resulting, in certain cases, from enthusiastic religious reverie, and from the other practices of saints and anchorites. The evidence respecting them has never yet been honestly collected, much less dispassionately examined : but assuredly, there is in that direction a probability, and more than a probability, of dangerous error, while there is none whatever in the practice of an active, cheerful, and benevolent life. The hope of attaining a higher religious position, which induces us to encounter, for its exalted alternative, the risk of unhealthy error, is often, as I said, founded more on pride than piety ; and those who, in modest usefulness, have accepted what seemed to them here the lowliest place in the kingdom of their Father, are not, I believe, the least likely to receive hereafter the command, then unmistakable, 'Friend, go up higher.'

LECTURE VIII

CRYSTAL CAPRICE.

Formal Lecture in Schoolroom, after some practical examination of minerals.

L. We have seen enough, children, though very little of what might be seen if we had more time, of mineral structures produced by visible opposition, or contest among elements ; structures of which the variety, however great, need not surprise us : for we quarrel, ourselves, for many and slight causes ;—much more, one should think, may crystals, who can only feel the antagonism, not argue about it. But there is a yet more singular mimicry of our human ways in the varieties of form which appear owing to no antagonistic force ; but merely to the variable humour and caprice of the crystals themselves : and I have asked you all to come into the school-room to-day, because, of course, this is a part of the crystal mind which must be peculiarly interesting to a feminine audience. (*Great symptoms of disapproval on the part of said audience.*) Now, you need not pretend that it will not interest you ; why should it not ? It is true that we men are never capricious ; but that only makes us the more dull and disagreeable. You, who are crystalline in brightness, as well as in caprice, charm infinitely, by infinitude of change. (*Audible murmurs of ‘Worse and worse!’ ‘As if we could be got over that way!’ &c. The LECTURER, however, observing the expression of the features to be more complacent, proceeds.*) And the most curious mimicry, if not of your changes of fashion, at least of your various modes (in healthy periods) of national costume, takes place among the crystals of different countries. With a little experience, it is quite possible to say at a glance, in what districts certain crystals have been

found; and although, if we had knowledge extended and accurate enough, we might of course ascertain the laws and circumstances which have necessarily produced the form peculiar to each locality, this would be just as true of the fancies of the human mind. If we could know the exact circumstances which affect it, we could foretell what now seems to us only caprice of thought, as well as what now seems to us only caprice of crystal: nay, so far as our knowledge reaches, it is on the whole easier to find some reason why the peasant girls of Berne should wear their caps in the shape of butterflies; and the peasant girls of Munich their's in the shape of shells, than to say why the rock-crystals of Dauphiné should all have their summits of the shape of lip-pieces of flageolets, while those of St. Gothard are symmetrical; or why the fluor of Chamouni is rose-coloured, and in octahedrons, while the fluor of Weardale is green, and in cubes. Still farther removed is the hope, at present, of accounting for minor differences in modes of grouping and construction. Take, for instance, the caprices of this single mineral, quartz;—variations upon a single theme. It has many forms; but see what it will make out of this *one*, the six-sided prism. For shortness' sake, I shall call the body of the prism its 'column,' and the pyramid at the extremities its 'cap.' Now, here, first you have a straight column, as long and thin as a stalk of asparagus, with two little caps at the ends; and here you have a short thick column, as solid as a haystack, with two fat caps at the ends; and here you have two caps fastened together, and no column at all between them! Then here is a crystal with its column fat in the middle, and tapering to a little cap; and here is one stalked like a mushroom, with a huge cap put on the top of a slender column! Then here is a column built wholly out of little caps, with a large smooth cap at the top. And here is a column built of columns and caps; the caps all truncated about half way to their points. And in both these last, the little crystals are set anyhow, and build the large one in a disorderly way; but here is a crystal made of columns and truncated caps, set in regular terraces all the way up.

MARY. But are not these, groups of crystals, rather than one crystal?

L. What do you mean by a group, and what by one crystal?

DORA (*audibly aside, to MARY, who is brought to pause*). You know you are never expected to answer, Mary.

L. I'm sure this is easy enough. What do you mean by a group of people?

MARY. Three or four together, or a good many together, like the caps in these crystals.

L. But when a great many persons get together they don't take the shape of one person?

(MARY *still at pause*.)

ISABEL. No, because they can't; but, you know the crystals can; so why shouldn't they?

L. Well, they don't; that is to say, they don't always, nor even often. Look here, Isabel.

ISABEL. What a nasty ugly thing!

L. I'm glad you think it so ugly. Yet it is made of beautiful crystals; they are a little grey and cold in colour, but most of them are clear.

ISABEL. But they're in such horrid, horrid disorder!

L. Yes; all disorder is horrid, when it is among things that are naturally orderly. Some little girl's rooms are naturally *disorderly*, I suppose; or I don't know how they could live in them, if they cry out so when they only see quartz crystals in confusion.

ISABEL. Oh! but how come they to be like that?

L. You may well ask. And yet you will always hear people talking as if they thought order more wonderful than disorder! It *is* wonderful—as we have seen; but to me, as to you, child, the supremely wonderful thing is that nature should ever be ruinous or wasteful, or deathful! I look at this wild piece of crystallisation with endless astonishment.

MARY. Where does it come from?

L. The Tête Noire of Chamonix. What makes it more strange is that it should be in a vein of fine quartz rock. If it

were in a mouldering rock, it would be natural enough ; but in the midst of so fine substance, here are the crystals tossed in a heap ; some large, myriads small (almost as small as dust), tumbling over each other like a terrified crowd, and glued together by the sides, and edges, and backs, and heads ; some warped, and some pushed out and in, and all spoiled, and each spoiling the rest.

MARY. And how flat they all are !

L. Yes ; that's the fashion at the Tête Noire.

MARY. But surely this is ruin, not caprice ?

L. I believe it is in great part misfortune ; and we will examine these crystal troubles in next lecture. But if you want to see the gracefullest and happiest caprices of which dust is capable, you must go to the Hartz ; not that I ever mean to go there myself, for I want to retain the romantic feeling about the name ; and I have done myself some harm already by seeing the monotonous and heavy form of the Brocken from the suburbs of Brunswick. But whether the mountains be picturesque or not, the tricks which the goblins (as I am told) teach the crystals in them, are incomparably pretty. They work chiefly on the mind of a docile, bluish coloured, carbonate of lime ; which comes out of a grey limestone. The goblins take the greatest possible care of its education, and see that nothing happens to it to hurt its temper ; and when it may be supposed to have arrived at the crisis which is, to a well brought up mineral, what presentation at court is to a young lady—after which it is expected to set fashions—there's no end to its pretty ways of behaving. First it will make itself into pointed darts as fine as hoar-frost ; here, it is changed into a white fur as fine as silk ; here into little crowns and circlets, as bright as silver ; as if for the gnome princesses to wear ; here it is in beautiful little plates, for them to eat off ; presently it is in towers which they might be imprisoned in ; presently in caves and cells, where they may make nun-gnomes of themselves, and no gnome ever hear of them more ; here is some of it in sheaves, like corn ; here, some in drifts, like snow ; here, some in rays, like stars : and, though these are, all of them, necessarily, shapes that the mineral

takes in other places, they are all taken here with such a grace that you recognise the high caste and breeding of the crystals wherever you meet them ; and know at once they are Hartz-born.

Of course, such fine things as these are only done by crystals which are perfectly good, and good-humoured ; and of course, also, there are ill-humoured crystals who torment each other, and annoy quieter crystals, yet without coming to anything like serious war. Here (for once) is some ill-disposed quartz, tormenting a peaceable octahedron of fluor, in mere caprice. I looked at it the other night so long, and so wonderingly, just before putting my candle out, that I fell into another strange dream. But you don't care about dreams.

DORA. No ; we didn't, yesterday ; but you know we are made up of caprice ; so we do, to-day : and you must tell it us directly.

L. Well, you see, Neith and her work were still much in my mind ; and then, I had been looking over these Hartz things for you, and thinking of the sort of grotesque sympathy there seemed to be in them with the beautiful fringe and pinnacle work of Northern architecture. So, when I fell asleep, I thought I saw Neith and St. Barbara talking together.

DORA. But what had St. Barbara to do with it ? *

L. My dear, I am quite sure St. Barbara is the patroness of good architects : not St. Thomas, whatever the old builders thought. It might be very fine, according to the monks' notions, in St. Thomas, to give all his employer's money away to the poor : but breaches of contract are bad foundations ; and I believe, it was not he, but St. Barbara, who overlooked the work in all the buildings you and I care about. However that may be, it was certainly she whom I saw in my dream with Neith. Neith was sitting weaving, and I thought she looked sad, and threw her shuttle slowly ; and St. Barbara was standing at her side, in a stiff little gown, all ins and outs, and angles ; but so bright with embroidery that it dazzled me whenever she moved ; the train of it was just like a heap of broken

* Note v.

jewels, it was so stiff, and full of corners, and so many-coloured, and bright. Her hair fell over her shoulders in long, delicate waves, from under a little three pinnacled crown, like a tower. She was asking Neith about the laws of architecture in Egypt and Greece; and when Neith told her the measures of the pyramids, St. Barbara said she thought they would have been better three-cornered: and when Neith told her the measures of the Parthenon, St. Barbara said she thought it ought to have had two transepts. But she was pleased when Neith told her of the temple of the dew, and of the Caryan maidens bearing its frieze: and then she thought that perhaps Neith would like to hear what sort of temples she was building herself, in the French valleys, and on the crags of the Rhine. So she began gossiping, just as one of you might to an old lady: and certainly she talked in the sweetest way in the world to Neith; and explained to her all about crockets and pinnacles: and Neith sat, looking very grave; and always graver as St. Barbara went on; till at last, I'm sorry to say, St. Barbara lost her temper a little.

MAY (*very grave herself*). 'St. Barbara?'

L. Yes, May. Why shouldn't she? It was very tiresome of Neith to sit looking like that.

MAY. But, then, St. Barbara was a saint!

L. What's that, May?

MAY. A saint! A saint is—I am sure you know!

L. If I did, it would not make me sure that you knew too, May: but I don't.

VIOLET (*expressing the incredulity of the audience*). Oh,—sir!

L. That is to say, I know that people are called saints who are supposed to be better than others: but I don't know how much better they must be, in order to be saints; nor how nearly anybody may be a saint, and yet not be quite one; nor whether everybody who is called a saint was one; nor whether everybody who isn't called a saint, isn't one.

(*General silence; the audience feeling themselves on the verge of the Infinities—and a little shocked—and much puzzled by so many questions at once.*)

L. Besides, did you never hear that verse about being 'called to be saints'?

MAY (*repeats Rom. i. 7.*)

L. Quite right, May. Well, then, who are called to be that? People in Rome only?

MAY. Everybody, I suppose, whom God loves.

L. What! little girls as well as other people?

MAY. All grown-up people, I mean.

L. Why not little girls? Are they wickeder when they are little?

MAY. Oh, I hope not.

L. Why not little girls, then?

(*Pause.*)

LILY. Because, you know, we can't be worth anything if we're ever so good;—I mean, if we try to be ever so good; and we can't do difficult things—like saints.

L. I am afraid, my dear, that old people are not more able or willing for their difficulties than you children are for yours. All I can say is, that if ever I see any of you, when you are seven or eight and twenty, knitting your brows over any work you want to do or to understand, as I saw you, Lily, knitting your brows over your slate this morning, I should think you very noble women. But—to come back to my dream—St. Barbara *did* lose her temper a little; and I was not surprised. For you can't think how provoking Neith looked, sitting there just like a statue of sandstone; only going on weaving, like a machine; and never quickening the cast of her shuttle; while St. Barbara was telling her so eagerly all about the most beautiful things, and chattering away, as fast as bells ring on Christmas Eve, till she saw that Neith didn't care; and then St. Barbara got as red as a rose, and stopped, just in time;—or I think she would really have said something naughty.

ISABEL. Oh, please, but didn't Neith say anything then?

L. Yes. She said, quite quietly, 'It may be very pretty, my love; but it is all nonsense.'

ISABEL. Oh dear, oh dear; and then?

L. Well; then I was a little angry myself, and hoped St.

Barbara would be quite angry ; but she waited. She bit her lips first ; and then gave a great sigh—such a wild, sweet sigh—and then she knelt down and hid her face on Neith's knees. Then Neith smiled a little, and was moved.

ISABEL. Oh, I am so glad !

L. And she touched St. Barbara's forehead with a flower of white lotus ; and St. Barbara sobbed once or twice, and then said : ' If you only could see how beautiful it is, and how much it makes people feel what is good and lovely ; and if you could only hear the children singing in the Lady chapels ! ' And Neith smiled,—but still sadly,—and said, ' How do you know what I have seen, or heard, my love ? Do you think all those vaults and towers of yours have been built without me ? There was not a pillar in your Giotto's Santa Maria del Fiore which I did not set true by my spearshaft as it rose. But this pinnacle and flame work which has set your little heart on fire, is all vanity ; and you will see what it will come to, and that soon ; and none will grieve for it more than I. And then every one will disbelieve your pretty symbols and types. Men must be spoken simply to, my dear, if you would guide them kindly, and long.' But St. Barbara answered, that, ' Indeed she thought every one liked her work,' and that ' the people of different towns were as eager about their cathedral towers as about their privileges or their markets ; ' and then she asked Neith to come and build something with her, wall against tower ; and ' see whether the people will be as much pleased with your building as with mine.' But Neith answered, ' I will not contend with you, my dear. I strive not with those who love me ; and for those who hate me, it is not well to strive with me, as weaver Arachne knows. And remember, child, that nothing is ever done beautifully, which is done in rivalry ; nor nobly, which is done in pride.'

Then St. Barbara hung her head quite down, and said she was very sorry she had been so foolish ; and kissed Neith ; and stood thinking a minute : and then her eyes got bright again, and she said, she would go directly and build a chapel with five windows in it : four for the four cardinal virtues,

and one for humility, in the middle, bigger than the rest. And Neith very nearly laughed quite out, I thought; certainly her beautiful lips lost all their sternness for an instant; then she said, 'Well, love, build it, but do not put so many colours into your windows as you usually do; else no one will be able to see to read, inside: and when it is built, let a poor village priest consecrate it, and not an archbishop.' St. Barbara started a little, I thought, and turned as if to say something; but changed her mind, and gathered up her train, and went out. And Neith bent herself again to her loom, in which she was weaving a web of strange dark colours, I thought; but perhaps it was only after the glittering of St. Barbara's embroidered train: and I tried to make out the figures in Neith's web, and confused myself among them, as one always does in dreams; and then the dream changed altogether, and I found myself, all at once, among a crowd of little Gothic and Egyptian spirits, who were quarrelling: at least the Gothic ones were trying to quarrel; for the Egyptian ones only sat with their hands on their knees, and their aprons sticking out very stiffly; and stared. And after a while I began to understand what the matter was. It seemed that some of the troublesome building imps, who meddle and make continually, even in the best Gothic work, had been listening to St. Barbara's talk with Neith; and had made up their minds that Neith had no workpeople who could build against them. They were but dull imps, as you may fancy by their thinking that; and never had done much, except disturbing the great Gothic building angels at their work, and playing tricks to each other; indeed, of late they had been living years and years, like bats, up under the cornices of Strasbourg and Cologne cathedrals, with nothing to do but to make mouths at the people below. However, they thought they knew everything about tower building; and those who had heard what Neith said, told the rest; and they all flew down directly, chattering in German, like jack-daws, to show Neith's people what they could do. And they had found some of Neith's old workpeople somewhere near Sais, sitting in the sun, with their hands on their knees; and

abused them heartily : and Neith's people did not mind at first, but, after a while, they seemed to get tired of the noise ; and one or two rose up slowly, and laid hold of their measuring rods, and said, 'If St. Barbara's people liked to build with them, tower against pyramid, they would show them how to lay stones.' Then the little Gothic spirits threw a great many double somersaults for joy ; and put the tips of their tongues out sily to each other, on one side ; and I heard the Egyptians say, 'they must be some new kind of frog—they didn't think there was much building in *them*.' However, the stiff old workers took their rods, as I said, and measured out a square space of sand ; but as soon as the German spirits saw that, they declared they wanted exactly that bit of ground to build on, themselves. Then the Egyptian builders offered to go farther off, and the Germans ones said, 'Ja wohl.' But as soon as the Egyptians had measured out another square, the little Germans said they must have some of that too. Then Neith's people laughed ; and said, 'they might take as much as they liked, but they would not move the plan of their pyramid again.' Then the little Germans took three pieces, and began to build three spires directly ; one large, and two little. And when the Egyptians saw they had fairly begun, they laid their foundation all round, of large square stones : and began to build, so steadily that they had like to have swallowed up the three little German spires. So when the Gothic spirits saw that, they built their spires leaning, like the tower of Pisa, that they might stick out at the side of the pyramid. And Neith's people stared at them ; and thought it very clever, but very wrong ; and on they went, in their own way, and said nothing. Then the little Gothic spirits were terribly provoked because they could not spoil the shape of the pyramid ; and they sat down all along the ledges of it to make faces ; but that did no good. Then they ran to the corners, and put their elbows on their knees, and stuck themselves out as far as they could, and made more faces ; but that did no good, neither. Then they looked up to the sky, and opened their mouths wide, and gobbled, and said it was too hot for work, and wondered

when it would rain ; but that did no good, neither. And all the while the Egyptian spirits were laying step above step, patiently. But when the Gothic ones looked, and saw how high they had got, they said, ‘Ach, Himmel!’ and flew down in a great black cluster to the bottom ; and swept out a level spot in the sand with their wings, in no time, and began building a tower straight up, as fast as they could. And the Egyptians stood still again to stare at them ; for the Gothic spirits had got quite into a passion, and were really working very wonderfully. They cut the sandstone into strips as fine as reeds ; and put one reed on the top of another, so that you could not see where they fitted : and they twisted them in and out like basket work, and knotted them into likenesses of ugly faces, and of strange beasts biting each other ; and up they went, and up still, and they made spiral staircases at the corners, for the loaded workers to come up by (for I saw they were but weak imps, and could not fly with stones on their backs), and then they made traceried galleries for them to run round by ; and so up again ; with finer and finer work, till the Egyptians wondered whether they meant the thing for a tower or a pillar : and I heard them saying to one another, ‘It was nearly as pretty as lotus stalks ; and if it were not for the ugly faces, there would be a fine temple, if they were going to build it all with pillars as big as that!’ But in a minute afterwards,—just as the Gothic spirits had carried their work as high as the upper course, but three or four, of the pyramid—the Egyptians called out to them to ‘mind what they were about, for the sand was running away from under one of their tower corners.’ But it was too late to mind what they were about ; for, in another instant, the whole tower sloped aside ; and the Gothic imps rose out of it like a flight of puffins, in a single cloud ; but screaming worse than any puffins you ever heard : and down came the tower, all in a piece, like a falling poplar, with its head right on the flank of the pyramid ; against which it snapped short off. And of course that waked me !

MARY. What a shame of you to have such a dream, after all you have told us about Gothic architecture !

L. If you have understood anything I ever told you about it, you know that no architecture was ever corrupted more miserably ; or abolished more justly by the accomplishment of its own follies. Besides, even in its days of power, it was subject to catastrophes of this kind. I have stood too often, mourning, by the grand fragment of the apse of Beauvais, not to have that fact well burnt into me. Still, you must have seen, surely, that these imps were of the Flamboyant school ; or, at least, of the German schools correspondent with it in extravagance.

MARY. But, then, where is the crystal about which you dreamed all this ?

L. Here ; but I suppose little Pthah has touched it again, for it is very small. But, you see, here is the pyramid, built of great square stones of fluor spar, straight up ; and here are the three little pinnacles of mischievous quartz, which have set themselves, at the same time, on the same foundation ; only they lean like the tower of Pisa, and come out obliquely at the side : and here is one great spire of quartz which seems as if it had been meant to stand straight up, a little way off ; and then had fallen down against the pyramid base, breaking its pinnacle away. In reality, it has crystallised horizontally, and terminated imperfectly : but, then, by what caprice does one crystal form horizontally, when all the rest stand upright ? But this is nothing to the phantasies of fluor, and quartz, and some other such companions, when they get leave to do anything they like. I could show you fifty specimens, about every one of which you might fancy a new fairy tale. Not that, in truth, any crystals get leave to do quite what they like ; and many of them are sadly tried, and have little time for caprices—poor things !

MARY. I thought they always looked as if they were either in play or in mischief ! What trials have they ?

L. Trials much like our own. Sickness, and starvation ; fevers, and agues, and palsy ; oppression ; and old age, and the necessity of passing away in their time, like all else. If there's any pity in you, you must come to-morrow, and take some part in these crystal griefs.

DORA. I am sure we shall cry till our eyes are red.

L. Ah, you may laugh, Dora: but I've been made grave, not once, nor twice, to see that even crystals 'cannot choose but be old' at last. It may be but a shallow proverb of the Justice's; but it is a shrewdly wide one.

DORA (*pensive, for once*). I suppose it *is* very dreadful to be old! But then (*brightening again*), what should we do without our dear old friends, and our nice old lecturers?

L. If all nice old lecturers were minded as little as one I know of —

DORA. And if they all meant as little what they say, would they not deserve it? But we'll come—we'll come, and cry.

LECTURE IX.

CRYSTAL SORROWS.

Working Lecture in Schoolroom.

L. We have been hitherto talking, children, as if crystals might live, and play, and quarrel, and behave ill or well, according to their characters, without interruption from anything else. But so far from this being so, nearly all crystals, whatever their characters, have to live a hard life of it, and meet with many misfortunes. If we could see far enough, we should find, indeed, that, at the root, all their vices were misfortunes: but to-day I want you to see what sort of troubles the best crystals have to go through, occasionally, by no fault of their own.

This black thing, which is one of the prettiest of the very few pretty black things in the world, is called 'Tourmaline.' It may be transparent, and green, or red, as well as black; and then no stone can be prettier (only, all the light that gets into it, I believe, comes out a good deal the worse; and is not itself again for a long while). But this is the commonest state of it,—opaque, and as black as jet.

MARY. What does 'Tourmaline' mean?

L. They say it is Ceylanese, and I don't know Ceylanese; but we may always be thankful for a graceful word, whatever it means.

MARY. And what is it made of?

L. A little of everything; there's always flint, and clay, and magnesia in it; and the black is iron, according to its fancy; and there's boracic acid, if you know what that is; and if you don't, I cannot tell you to-day; and it doesn't signify: and there's potash, and soda; and, on the whole, the chemistry of it is more like a mediæval doctor's prescription, than

the making of a respectable mineral: but it may, perhaps, be owing to the strange complexity of its make, that it has a notable habit which makes it, to me, one of the most interesting of minerals. You see these two crystals are broken right across, in many places, just as if they had been shafts of black marble fallen from a ruinous temple; and here they lie, imbedded in white quartz, fragment succeeding fragment, keeping the line of the original crystal, while the quartz fills up the intervening spaces. Now tourmaline has a trick of doing this, more than any other mineral I know: here is another bit which I picked up on the glacier of Macagnaga; it is broken, like a pillar built of very flat broad stones, into about thirty joints, and all these are heaved and warped away from each other sideways, almost into a line of steps; and then all is filled up with quartz paste. And here, lastly, is a green Indian piece, in which the pillar is first disjointed, and then wrung round into the shape of an S.

MARY. How *can* this have been done?

L. There are a thousand ways in which it may have been done; the difficulty is not to account for the doing of it; but for the showing of it in some crystals, and not in others. You never by any chance get a quartz crystal broken or twisted in this way. If it break or twist at all, which it does sometimes, like the spire of Dijon, it is by its own will or fault; it never seems to have been passively crushed. But, for the forces which cause this passive ruin of the tourmaline,—here is a stone which will show you multitudes of them in operation at once. It is known as ‘brecciated agate,’ beautiful, as you see; and highly valued as a pebble: yet, so far as I can read or hear, no one has ever looked at it with the least attention. At the first glance, you see it is made of very fine red striped agates, which have been broken into small pieces, and fastened together again by paste, also of agate. There would be nothing wonderful in this, if this were all. It is well known that by the movements of strata, portions of rock are often shattered to pieces:—well known also that agate is a deposit of flint by water under certain conditions of heat and pressure: there is, therefore, nothing wonderful in an agate’s

being broken ; and nothing wonderful in its being mended with the solution out of which it was itself originally congealed. And with this explanation, most people, looking at a brecciated agate, or brecciated anything, seem to be satisfied. I was so myself, for twenty years ; but, lately happening to stay for some time at the Swiss Baden, where the beach of the Limmat is almost wholly composed of brecciated limestones, I began to examine them thoughtfully ; and perceived, in the end, that they were, one and all, knots of as rich mystery as any poor little human brain was ever lost in. That piece of agate in your hand, Mary, will show you many of the common phenomena of breccias ; but you need not knit your brows over it in that way ; depend upon it, neither you nor I shall ever know anything about the way it was made, as long as we live.

DORA. That does not seem much to depend upon.

L. Pardon me, pass. When once we gain some real notion of the extent and the unconquerableness of our ignorance, it is a very broad and restful thing to depend upon : you can throw yourself upon it at ease, as on a cloud, to feast with the gods. You do not thenceforward trouble yourself,—nor any one else,—with theories, or the contradiction of theories ; you neither get headache nor heartburning ; and you never more waste your poor little store of strength, or allowance of time.

However, there are certain facts, about this agate-making, which I can tell you ; and then you may look at it in a pleasant wonder as long as you like ; pleasant wonder is no loss of time.

First, then, it is not broken freely by a blow ; it is slowly wrung, or ground, to pieces. You can only with extreme dimness conceive the force exerted on mountains in transitional states of movement. You have all read a little geology ; and you know how coolly geologists talk of mountains being raised or depressed. They talk coolly of it, because they are accustomed to the fact ; but the very universality of the fact prevents us from ever conceiving distinctly the conditions of force involved. You know I was living last year

in Savoy ; my house was on the back of a sloping mountain, which rose gradually for two miles, behind it ; and then fell at once in a great precipice towards Geneva, going down three thousand feet in four or five cliffs, or steps. Now that whole group of cliffs had simply been torn away by sheer strength from the rocks below, as if the whole mass had been as soft as biscuit. Put four or five captains' biscuits on the floor, on the top of one another ; and try to break them all in half, not by bending, but by holding one half down, and tearing the other halves straight up ;—of course you will not be able to do it, but you will feel and comprehend the sort of force needed. Then, fancy each captains' biscuit a bed of rock, six or seven hundred feet thick ; and the whole mass torn straight through ; and one half heaved up three thousand feet, grinding against the other as it rose,—and you will have some idea of the making of the Mont Salève.

MAY. But it must crush the rocks all to dust !

L. No ; for there is no room for dust. The pressure is too great ; probably the heat developed also so great that the rock is made partly ductile ; but the worst of it is, that we never can see these parts of mountains in the state they were left in at the time of their elevation ; for it is precisely in these rents and dislocations that the crystalline power principally exerts itself. It is essentially a styptic power, and wherever the earth is torn, it heals and binds ; nay, the torture and grieving of the earth seem necessary to bring out its full energy ; for you only find the crystalline living power fully in action, where the rents and faults are deep and many.

DORA. If you please, sir,—would you tell us—what are 'faults' ?

L. You never heard of such things ?

DORA. Never in all our lives.

L. When a vein of rock which is going on smoothly, is interrupted by another troublesome little vein, which stops it, and puts it out, so that it has to begin again in another place—that is called a fault. I always think it ought to be called the fault of the vein that interrupts it ; but the miners always call it the fault of the vein that is interrupted.

DORA. So it is, if it does not begin again where it left off.

L. Well, that is certainly the gist of the business: but, whatever good-natured old lecturers may do, the rocks have a bad habit, when they are once interrupted, of never asking 'Where was I?'

DORA. When the two halves of the dining table came separate, yesterday, was that a 'fault'?

L. Yes; but not the table's. However, it is not a bad illustration, Dora. When beds of rock are only interrupted by a fissure, but remain at the same level, like the two halves of the table, it is not called a fault, but only a fissure; but if one half of the table be either tilted higher than the other, or pushed to the side, so that the two parts will not fit, it is a fault. You had better read the chapter on faults in Jukes's *Geology*; then you will know all about it. And this rent that I am telling you of in the Salève, is one only of myriads, to which are owing the forms of the Alps, as, I believe, of all great mountain chains. Wherever you see a precipice on any scale of real magnificence, you will nearly always find it owing to some dislocation of this kind; but the point of chief wonder to me, is the delicacy of the touch by which these gigantic rents have been apparently accomplished. Note, however, that we have no clear evidence, hitherto, of the time taken to produce any of them. We know that a change of temperature alters the position and the angles of the atoms of crystals, and also the entire bulk of rocks. We know that in all volcanic, and the greater part of all subterranean, action, temperatures are continually changing, and therefore masses of rock must be expanding or contracting, with infinite slowness, but with infinite force. This pressure must result in mechanical strain somewhere, both in their own substance, and in that of the rocks surrounding them; and we can form no conception of the result of irresistible pressure, applied so as to rend and raise, with imperceptible slowness of gradation, masses thousands of feet in thickness. We want some experiments tried on masses of iron and stone; and we can't get them tried, because Christian creatures never will seriously and sufficiently spend money, except to find out the shortest ways

of killing each other. But, besides this slow kind of pressure, there is evidence of more or less sudden violence, on the same terrific scale ; and, through it all, the wonder, as I said, is always to me the delicacy of touch. I cut a block of the Salève limestone from the edge of one of the principal faults which have formed the precipice ; it is a lovely compact limestone, and the fault itself is filled up with a red breccia, formed of the crushed fragments of the torn rock, cemented by a rich red crystalline paste. I have had the piece I cut from it smoothed, and polished across the junction ; here it is ; and you may now pass your soft little fingers over the surface, without so much as feeling the place where a rock which all the hills of England might have been sunk in the body of, and not a summit seen, was torn asunder through that whole thickness, as a thin dress is torn when you tread upon it.

(The audience examine the stone, and touch it timidly ; but the matter remains inconceivable to them.)

MARY (*struck by the beauty of the stone*). But this is almost marble ?

L. It is quite marble. And another singular point in the business, to my mind, is that these stones, which men have been cutting into slabs, for thousands of years, to ornament their principal buildings with,—and which, under the general name of ‘marble,’ have been the delight of the eyes, and the wealth of architecture, among all civilised nations,—are precisely those on which the signs and brands of these earth-agonies have been chiefly struck ; and there is not a purple vein nor flaming zone in them, which is not the record of their ancient torture. What a boundless capacity for sleep, and for serene stupidity, there is in the human mind ! Fancy reflective beings, who cut and polish stones for three thousand years, for the sake of the pretty stains upon them ; and educate themselves to an art at last (such as it is), of imitating these veins by dexterous painting ; and never a curious soul of them, all that while, asks, ‘What painted the rocks ?’

(The audience look dejected, and ashamed of themselves.)

The fact is, we are all, and always, asleep, through our lives ; and it is only by pinching ourselves very hard that we ever come to see, or understand, anything. At least, it is not always we who pinch ourselves ; sometimes other people pinch us ; which I suppose is very good of them,—or other things, which I suppose is very proper of them. But it is a sad life ; made up chiefly of naps and pinches.

(Some of the audience, on this, appearing to think that the others require pinching, the LECTURER changes the subject.)

Now, however, for once, look at a piece of marble carefully, and think about it. You see this is one side of the fault ; the other side is down or up, nobody knows where ; but, on this side, you can trace the evidence of the dragging and tearing action. All along the edge of this marble, the ends of the fibres of the rock are torn, here an inch, and there half an inch, away from each other ; and you see the exact places where they fitted, before they were torn separate ; and you see the rents are now all filled up with the sanguine paste, full of the broken pieces of the rock ; the paste itself seems to have been half melted, and partly to have also melted the edge of the fragments it contains, and then to have crystallised with them, and round them. And the brecciated agate I first showed you contains exactly the same phenomena ; a zoned crystallisation going on amidst the cemented fragments, partly altering the structure of those fragments themselves, and subject to continual change, either in the intensity of its own power, or in the nature of the materials submitted to it ;—so that, at one time, gravity acts upon them, and disposes them in horizontal layers, or causes them to droop in stalactites ; and at another, gravity is entirely defied, and the substances in solution are crystallised in bands of equal thickness on every side of the cell. It would require a course of lectures longer than these (I have a great mind,—you have behaved so saucily—to stay and give them) to describe to you the phenomena of this kind, in agates and chalcedonies only ;—nay, there is a single sarcophagus in the British Museum, covered with grand sculpture of the 18th dynasty,

which contains in the magnificent breccia (agates and jaspers imbedded in porphyry), out of which it is hewn, material for the thought of years ; and record of the earth-sorrow of ages in comparison with the duration of which, the Egyptian letters tell us but the history of the evening and morning of a day.

Agates, I think, of all stones, confess most of their past history ; but all crystallisation goes on under, and partly records, circumstances of this kind—circumstances of infinite variety, but always involving difficulty, interruption, and change of condition at different times. Observe, first, you have the whole mass of the rock in motion, either contracting itself, and so gradually widening the cracks ; or being compressed, and thereby closing them, and crushing their edges ;—and, if one part of its substance be softer, at the given temperature, than another, probably squeezing that softer substance out into the veins. Then the veins themselves, when the rock leaves them open by its contraction, act with various power of suction upon its substance ;—by capillary attraction when they are fine,—by that of pure vacuity when they are larger, or by changes in the constitution and condensation of the mixed gases with which they have been originally filled. Those gases themselves may be supplied in all variation of volume and power from below ; or, slowly, by the decomposition of the rocks themselves ; and, at changing temperatures, must exert relatively changing forces of decomposition and combination on the walls of the veins they fill ; while water, at every degree of heat and pressure (from beds of everlasting ice, alternate with cliffs of native rock, to volumes of red hot, or white hot, steam), congeals, and drips, and throbs, and thrills, from crag to crag ; and breathes from pulse to pulse of foaming or fiery arteries, whose beating is felt through chains of the great islands of the Indian seas, as your own pulses lift your bracelets, and makes whole kingdoms of the world quiver in deadly earthquake, as if they were light as aspen leaves. And, remember, the poor little crystals have to live their lives, and mind their own affairs, in the midst of all this, as best they may. They are wonderfully like human

creatures,—forget all that is going on if they don't see it, however dreadful ; and never think what is to happen to-morrow. They are spiteful or loving, and indolent or painstaking, and orderly or licentious, with no thought whatever of the lava or the flood which may break over them any day ; and evaporate them into air-bubbles, or wash them into a solution of salts. And you may look at them, once understanding the surrounding conditions of their fate, with an endless interest. You will see crowds of unfortunate little crystals, who have been forced to constitute themselves in a hurry, their dissolving element being fiercely scorched away ; you will see them doing their best, bright and numberless, but tiny. Then you will find indulged crystals, who have had centuries to form themselves in, and have changed their mind and ways continually ; and have been tired, and taken heart again ; and have been sick, and got well again ; and thought they would try a different diet, and then thought better of it ; and made but a poor use of their advantages, after all. And others you will see, who have begun life as wicked crystals ; and then have been impressed by alarming circumstances, and have become converted crystals, and behaved amazingly for a little while, and fallen away again, and ended, but discreditably, perhaps even in decomposition ; so that one doesn't know what will become of them. And sometimes you will see deceitful crystals, that look as soft as velvet, and are deadly to all near them ; and sometimes you will see deceitful crystals, that seem flint-edged, like our little quartz-crystal of a housekeeper here, (hush ! Dora,) and are endlessly gentle and true wherever gentleness and truth are needed. And sometimes you will see little child-crystals put to school like school-girls, and made to stand in rows ; and taken the greatest care of, and taught how to hold themselves up, and behave : and sometimes you will see unhappy little child-crystals left to lie about in the dirt, and pick up their living, and learn manners, where they can. And sometimes you will see fat crystals eating up thin ones, like great capitalists and little labourers ; and politico-economic crystals teaching the stupid ones how to eat each other, and cheat each other ; and foolish crystals getting in the way of wise

ones ; and impatient crystals spoiling the plans of patient ones, irreparably ; just as things go on in the world. And sometimes you may see hypocritical crystals taking the shape of others, though they are nothing like in their minds ; and vampire crystals eating out the hearts of others ; and hermit-crab crystals living in the shells of others ; and parasite crystals living on the means of others ; and courtier crystals glittering in attendance upon others ; and all these, besides the two great companies of war and peace, who ally themselves, resolutely to attack, or resolutely to defend. And for the close, you see the broad shadow and deadly force of inevitable fate, above all this : you see the multitudes of crystals whose time has come ; not a set time, as with us, but yet a time, sooner or later, when they all must give up their crystal ghosts :—when the strength by which they grew, and the breath given them to breathe, pass away from them ; and they fail, and are consumed, and vanish away ; and another generation is brought to life, framed out of their ashes.

MARY. It is very terrible. Is it not the complete fulfilment, down into the very dust, of that verse : ‘The whole creation groaneth and travaileth in pain’ ?

L. I do not know that it is in pain, Mary : at least, the evidence tends to show that there is much more pleasure than pain, as soon as sensation becomes possible.

LUCILLA. But then, surely, if we are told that it is pain, it must be pain ?

L. Yes ; if we are told ; and told in the way you mean, Lucilla ; but nothing is said of the proportion to pleasure. Unmitigated pain would kill any of us in a few hours ; pain equal to our pleasures would make us loathe life ; the word itself cannot be applied to the lower conditions of matter, in its ordinary sense. But wait till to-morrow to ask me about this. To-morrow is to be kept for questions and difficulties ; let us keep to the plain facts to-day. There is yet one group of facts connected with this rending of the rocks, which I especially want you to notice. You know, when you have mended a very old dress, quite meritoriously, till it won’t mend any more—

EGYPT (*interrupting*). Could not you sometimes take gentlemen's work to illustrate by?

L. Gentlemen's work is rarely so useful as yours, Egypt; and when it is useful, girls cannot easily understand it.

DORA. I am sure we should understand it better than gentlemen understand about sewing.

L. My dear, I hope I always speak modestly, and under correction, when I touch upon matters of the kind too high for me; and besides, I never intend to speak otherwise than respectfully of sewing;—though you always seem to think I am laughing at you. In all seriousness, illustrations from sewing are those which Neith likes me best to use; and which young ladies ought to like everybody to use. What do you think the beautiful word 'wife' comes from?

DORA (*tossing her head*). I don't think it is a particularly beautiful word.

L. Perhaps not. At your ages you may think 'bride' sounds better; but wife's the word for wear. depend upon it. It is the great word in which the English and Latin languages conquer the French and the Greek. I hope the French will some day get a word for it, yet, instead of their dreadful 'femme.' But what do you think it comes from?

DORA. I never *did* think about it.

L. Nor you, Sibyl?

SIBYL. No; I thought it was Saxon, and stopped there.

L. Yes; but the great good of Saxon words is, that they usually do mean something. Wife means 'weaver.' You have all the right to call yourselves little 'housewives,' when you sew neatly.

DORA. But I don't think we want to call ourselves 'little housewives.'

L. You must either be house-Wives, or house-Moths; remember that. In the deep sense, you must either weave men's fortunes, and embroider them; or feed upon, and bring them to decay. You had better let me keep my sewing illustration, and help me out with it.

DORA. Well we'll hear it, under protest.

L. You have heard it before; but with reference to other

matters. When it is said, 'no man putteth a piece of new cloth on an old garment, else it taketh from the old,' does it not mean that the new piece tears the old one away at the sewn edge?

DORA. Yes; certainly.

L. And when you mend a decayed stuff with strong thread, does not the whole edge come away sometimes, when it tears again?

DORA. Yes; and then it is of no use to mend it any more.

L. Well, the rocks don't seem to think that: but the same thing happens to them continually. I told you they were full of rents, or veins. Large masses of mountain are sometimes as full of veins as your hand is; and of veins nearly as fine (only you know a rock vein does not mean a tube, but a crack or cleft). Now these clefts are mended, usually, with the strongest material the rock can find; and often literally with threads; for the gradually opening rent seems to draw the substance it is filled with into fibres, which cross from one side of it to the other, and are partly crystalline; so that, when the crystals become distinct, the fissure has often exactly the look of a tear, brought together with strong cross stitches. Now when this is completely done, and all has been fastened and made firm, perhaps some new change of temperature may occur, and the rock begin to contract again. Then the old vein must open wider; or else another open elsewhere. If the old vein widen, it *may* do so at its centre; but it constantly happens, with well filled veins, that the cross stitches are too strong to break; the walls of the vein, instead, are torn away by them; and another little supplementary vein—often three or four successively—will be thus formed at the side of the first.

MARY. That is really very much like our work. But what do the mountains use to sew with?

L. Quartz, whenever they can get it: pure limestones are obliged to be content with carbonate of lime; but most mixed rocks can find some quartz for themselves. Here is a piece of black slate from the Buet: it looks merely like dry dark mud;—you could not think there was any quartz in it; but,

you see, its rents are all stitched together with beautiful white thread, which is the purest quartz, so close drawn that you can break it like flint, in the mass ; but, where it has been exposed to the weather, the fine fibrous structure is shown : and, more than that, you see the threads have been all twisted and pulled aside, this way and the other, by the warpings and shifting of the sides of the vein as it widened.

MARY. It is wonderful ! But is that going on still ? Are the mountains being torn and sewn together again at this moment ?

L. Yes, certainly, my dear : but I think, just as certainly (though geologists differ on this matter), not with the violence, or on the scale, of their ancient ruin and renewal. All things seem to be tending towards a condition of at least temporary rest ; and that groaning and travailing of the creation, as, assuredly, not wholly in pain, is not, in the full sense, ‘until now.’

MARY. I want so much to ask you about that !

SIBYL. Yes ; and we all want to ask you about a great many other things besides.

L. It seems to me that you have got quite as many new ideas as are good for any of you at present : and I should not like to burden you with more ; but I must see that those you have are clear, if I can make them so ; so we will have one more talk, for answer of questions, mainly. Think over all the ground, and make your difficulties thoroughly presentable. Then we’ll see what we can make of them.

DORA. They shall all be dressed in their very best ; and curtsey as they come in.

L. No, no, Dora ; no curtseys, if you please. I had enough of them the day you all took a fit of reverence, and curtsied me out of the room.

DORA. But, you know, we cured ourselves of the fault, at once, by that fit. We have never been the least respectful since. And the difficulties will only curtsey themselves out of the room, I hope ;—come in at one door—vanish at the other.

L. What a pleasant world it would be, if all its difficulties were taught to behave so ! However, one can generally make

something, or (better still) nothing, or at least less, of them, if they thoroughly know their own minds; and your difficulties—I must say that for you, children,—generally do know their own minds, as you do yourselves.

DORA. That is very kindly said for us. Some people would not allow so much as that girls had any minds to know.

L. They will at least admit that you have minds to change, Dora.

MARY. You might have left us the last speech, without a retouch. But we'll put our little minds, such as they are, in the best trim we can, for to-morrow

LECTURE X.

THE CRYSTAL REST.

Evening. The fireside. L's arm-chair in the comfortablest corner.

L. (*perceiving various arrangements being made of foot-stool, cushion, screen, and the like*). Yes, yes, it's all very fine! and I am to sit here to be asked questions till supper-time, am I?

DORA. I don't think you can have any supper to-night:—we've got so much to ask.

LILY. Oh, Miss Dora! We can fetch it him here, you know, so nicely!

L. Yes, Lily, that will be pleasant, with competitive examination going on over one's plate; the competition being among the examiners. Really, now that I know what teasing things girls are, I don't so much wonder that people used to put up patiently with the dragons who took *them* for supper. But I can't help myself, I suppose;—no thanks to St. George. Ask away, children, and I'll answer as civilly as may be.

DORA. We don't so much care about being answered civilly, as about not being asked things back again.

L. 'Ayez seulement la patience que je le parle.' There shall be no requitals.

DORA. Well, then, first of all—What shall we ask first, Mary?

MARY. It does not matter. I think all the questions come into one, at last, nearly.

DORA. You know, you always talk as if the crystals were alive; and we never understand how much you are in play, and how much in earnest. That's the first thing.

L. Neither do I understand, myself, my dear, how much I am in earnest. The stones puzzle me as much as I puzzle you. They look as if they were alive, and make me speak as if they were; and I do not in the least know how much truth

there is in the appearance. I'm not to ask things back again to-night, but all questions of this sort lead necessarily to the one main question, which we asked, before, in vain, 'What is it to be alive?'

DORA. Yes ; but we want to come back to that : for we've been reading scientific books about the 'conservation of forces,' and it seems all so grand, and wonderful ; and the experiments are so pretty ; and I suppose it must be all right : but then the books never speak as if there were any such thing as 'life.'

L. They mostly omit that part of the subject, certainly, Dora ; but they are beautifully right as far as they go ; and life is not a convenient element to deal with. They seem to have been getting some of it into and out of bottles, in their 'ozone' and 'antizone' lately ; but they still know little of it : and, certainly, I know less.

DORA. You promised not to be provoking, to-night.

L. Wait a minute. Though, quite truly, I know less of the secrets of life than the philosophers do ; I yet know one corner of ground on which we artists can stand, literally as 'Life Guards' at bay, as steadily as the Guards at Inkermann ; however hard the philosophers push. And you may stand with us, if once you learn to draw nicely.

DORA. I'm sure we are all trying ! but tell us where we may stand.

L. You may always stand by Form, against Force. To a painter, the essential character of anything is the form of it ; and the philosophers cannot touch that. They come and tell you, for instance, that there is as much heat, or motion, or calorific energy (or whatever else they like to call it), in a tea-kettle as in a Gier-eagle. Very good ; that is so ; and it is very interesting. It requires just as much heat as will boil the kettle, to take the Gier-eagle up to his nest ; and as much more to bring him down again on a hare or a partridge. But we painters, acknowledging the equality and similarity of the kettle and the bird in all scientific respects, attach, for our part, our principal interest to the difference in their forms. For us, the primarily cognisable facts, in the two

things, are, that the kettle has a spout, and the eagle a beak ; the one a lid on its back, the other a pair of wings ;—not to speak of the distinction also of volition, which the philosophers may properly call merely a form or mode of force ;—but then, to an artist, the form, or mode, is the gist of the business. The kettle chooses to sit still on the hob ; the eagle to recline on the air. It is the fact of the choice, not the equal degree of temperature in the fulfilment of it, which appears to us the more interesting circumstance ;—though the other is very interesting too. Exceedingly so ! Don't laugh, children ; the philosophers have been doing quite splendid work lately, in their own way : especially, the transformation of force into light is a great piece of systematised discovery ; and this notion about the sun's being supplied with his flame by ceaseless meteoric hail is grand, and looks very likely to be true. Of course, it is only the old gun-lock,—flint and steel,—on a large scale : but the order and majesty of it are sublime. Still, we sculptors and painters care little about it. 'It is very fine,' we say, 'and very useful, this knocking the light out of the sun, or into it, by an eternal cataract of planets. But you may hail away, so, for ever, and you will not knock out what we can. Here is a bit of silver, not the size of half-a-crown, on which, with a single hammer stroke, one of us, two thousand and odd years ago, hit out the head of the Apollo of Clazomenæ. It is merely a matter of form ; but if any of you philosophers, with your whole planetary system to hammer with, can hit out such another bit of silver as this,—we will take off our hats to you. For the present, we keep them on.'

MARY. Yes, I understand ; and that is nice ; but I don't think we shall any of us like having only form to depend upon.

L. It was not neglected in the making of Eve, my dear.

MARY. It does not seem to separate us from the dust of the ground. It is that breathing of the life which we want to understand.

L. So you should : but hold fast to the form, and defend that first, as distinguished from the mere transition of forces. Discern the moulding hand of the potter commanding the

clay, from his merely beating foot, as it turns the wheel. If you can find incense, in the vase, afterwards,—well : but it is curious how far mere form will carry you ahead of the philosophers. For instance, with regard to the most interesting of all their modes of force—light ;—they never consider how far the existence of it depends on the putting of certain vitreous and nervous substances into the formal arrangement which we call an eye. The German philosophers began the attack, long ago, on the other side, by telling us, there was no such thing as light at all, unless we chose to see it : now, German and English, both, have reversed their engines, and insist that light would be exactly the same light that it is, though nobody could ever see it. The fact being that the force must be there, and the eyes there ; and ‘light’ means the effect of the one on the other ;—and perhaps, also—(Plato saw farther into that mystery than any one has since, that I know of),—on something a little way within the eyes ; but we may stand quite safe, close behind the retina, and defy the philosophers.

SIBYL. But I don’t care so much about defying the philosophers, if only one could get a clear idea of life, or soul, for one’s self.

L. Well, Sibyl, you used to know more about it, in that cave of yours, than any of us. I was just going to ask you about inspiration, and the golden bough, and the like ; only I remembered I was not to ask anything. But, will not you, at least, tell us whether the ideas of Life, as the power of putting things together, or ‘making’ them ; and of Death, as the power of pushing things separate, or ‘unmaking’ them, may not be very simply held in balance against each other ?

SIBYL. No, I am not in my cave to-night ; and cannot tell you anything.

L. I think they may. Modern Philosophy is a great separator ; it is little more than the expansion of Molière’s great sentence, ‘Il s’ensuit de là, que tout ce qu’il y a de beau est dans les dictionnaires ; il n’y a que les mots qui sont transposés.’ But when you used to be in your cave, Sibyl, and to be inspired, there was (and there remains still in some small

measure), beyond the merely formative and sustaining power, another, which we painters call 'passion'—I don't know what the philosophers call it; we know it makes people red, or white; and therefore it must be something, itself; and perhaps it is the most truly 'poetic' or 'making' force of all, creating a world of its own out of a glance, or a sigh: and the want of passion is perhaps the truest death, or 'unmaking' of everything;—even of stones. By the way, you were all reading about that ascent of the Aiguille Verte, the other day?

SIBYL. Because you had told us it was so difficult, you thought it could not be ascended.

L. Yes; I believed the Aiguille Verte would have held its own. But do you recollect what one of the climbers exclaimed, when he first felt sure of reaching the summit?

SIBYL. Yes, it was, 'Oh, Aiguille Verte, vous êtes morte, vous êtes morte!'

L. That was true instinct. Real philosophic joy. Now can you at all fancy the difference between that feeling of triumph in a mountain's death; and the exultation of your beloved poet, in its life—

'Quantus Athos, aut quantus Eryx, aut ipse coruscis
Quum fremit illicibus quantus, gaudetque nivali
Vertice, se attollens pater Apenninus ad auras.'

DORA. You must translate for us mere house-keepers, please,—whatever the cave-keepers may know about it.

MARY. Will Dryden do?

L. No. Dryden is a far way worse than nothing, and nobody will 'do.' You can't translate it. But this is all you need know, that the lines are full of a passionate sense of the Apennines' fatherhood, or protecting power over Italy; and of sympathy with their joy in their snowy strength in heaven; and with the same joy, shuddering through all the leaves of their forests.

MARY. Yes, that is a difference indeed! but then, you know, one can't help feeling that it is fanciful. It is very delightful to imagine the mountains to be alive; but then,—are they alive?

L. It seems to me, on the whole, Mary, that the feelings of the purest and most mightily passioned human souls are likely to be the truest. Not, indeed, if they do not desire to know the truth, or blind themselves to it that they may please themselves with passion ; for then they are no longer pure : but if, continually seeking and accepting the truth as far as it is discernible, they trust their Maker for the integrity of the instincts He has gifted them with, and rest in the sense of a higher truth which they cannot demonstrate, I think they will be most in the right, so.

DORA and JESSIE (*clapping their hands*). Then we really may believe that the mountains are living?

L. You may at least earnestly believe, that the presence of the spirit which culminates in your own life, shows itself in dawning, wherever the dust of the earth begins to assume any orderly and lovely state. You will find it impossible to separate this idea of gradated manifestation from that of the vital power. Things are not either wholly alive, or wholly dead. They are less or more alive. Take the nearest, most easily examined instance—the life of a flower. Notice what a different degree and kind of life there is in the calyx and the corolla. The calyx is nothing but the swaddling clothes of the flower ; the child-blossom is bound up in it, hand and foot ; guarded in it, restrained by it, till the time of birth. The shell is hardly more subordinate to the germ in the egg, than the calyx to the blossom. It bursts at last ; but it never lives as the corolla does. It may fall at the moment its task is fulfilled, as in the poppy ; or wither gradually, as in the buttercup ; or persist in a ligneous apathy, after the flower is dead, as in the rose ; or harmonise itself so as to share in the aspect of the real flower, as in the lily ; but it never shares in the corolla's bright passion of life. And the gradations which thus exist between the different members of organic creatures, exist no less between the different ranges of organism. We know no higher or more energetic life than our own ; but there seems to me this great good in the idea of gradation of life—it admits the idea of a life above us, in other creatures, as much nobler than ours, as ours is nobler than that of the dust.

MARY. I am glad you have said that ; for I know Violet and Lucilla and May want to ask you something ; indeed, we all do ; only you frightened Violet so about the ant-hill, that she can't say a word ; and May is afraid of your teasing her, too : but I know they are wondering why you are always telling them about heathen gods and goddesses, as if you half believed in them ; and you represent them as good ; and then we see there is really a kind of truth in the stories about them ; and we are all puzzled : and, in this, we cannot even make our difficulty quite clear to ourselves ;—it would be such a long confused question, if we could ask you all we should like to know.

L. Nor is it any wonder, Mary ; for this is indeed the longest, and the most wildly confused question that reason can deal with ; but I will try to give you, quickly, a few clear ideas about the heathen gods, which you may follow out afterwards, as your knowledge increases.

Every heathen conception of deity in which you are likely to be interested, has three distinct characters :—

I. It has a physical character. It represents some of the great powers or objects of nature—sun or moon, or heaven, or the winds, or the sea. And the fables first related about each deity represent, figuratively, the action of the natural power which it represents ; such as the rising and setting of the sun, the tides of the sea, and so on.

II. It has an ethical character, and represents, in its history, the moral dealings of God with man. Thus Apollo is first, physically, the sun contending with darkness ; but morally, the power of divine life contending with corruption. Athena is, physically, the air ; morally, the breathing of the divine spirit of wisdom. Neptune is, physically, the sea ; morally, the supreme power of agitating passion ; and so on.

III. It has, at last, a personal character ; and is realised in the minds of its worshippers as a living spirit, with whom men may speak face to face, as a man speaks to his friend.

Now it is impossible to define exactly, how far, at any period of a national religion, these three ideas are mingled ; or how far one prevails over the other. Each enquirer

usually takes up one of these ideas, and pursues it, to the exclusion of the others : no impartial effort seems to have been made to discern the real state of the heathen imagination in its successive phases. For the question is not at all what a mythological figure meant in its origin ; but what it became in each subsequent mental development of the nation inheriting the thought. Exactly in proportion to the mental and moral insight of any race, its mythological figures mean more to it, and become more real. An early and savage race means nothing more (because it has nothing more to mean) by its Apollo, than the sun ; while a cultivated Greek means every operation of divine intellect and justice. The Neith, of Egypt, meant, physically, little more than the blue of the air ; but the Greek, in a climate of alternate storm and calm, represented the wild fringes of the storm-cloud by the serpents of her ægis ; and the lightning and cold of the highest thunder-clouds, by the Gorgon on her shield : while morally, the same types represented to him the mystery and changeeful terror of knowledge, as her spear and helm its ruling and defensive power. And no study can be more interesting, or more useful to you, than that of the different meanings which have been created by great nations, and great poets, out of mythological figures given them, at first, in utter simplicity. But when we approach them in their third, or personal, character (and, for its power over the whole national mind, this is far the leading one), we are met at once by questions which may well put all of you at pause. Were they idly imagined to be real beings ? and did they so usurp the place of the true God ? Or were they actually real beings—evil spirits,—leading men away from the true God ? Or is it conceivable that they might have been real beings,—good spirits,—entrusted with some message from the true God ? These were the questions you wanted to ask ; were they not, Lucilla ?

LUCILLA. Yes, indeed.

L. Well, Lucilla, the answer will much depend upon the clearness of your faith in the personality of the spirits which are described in the book of your own religion ;—their personality, observe, as distinguished from merely symbolical vis-

ions. For instance, when Jeremiah has the vision of the seething pot with its mouth to the north, you know that this which he sees is not a real thing; but merely a significant dream. Also, when Zechariah sees the speckled horses among the myrtle trees in the bottom, you still may suppose the vision symbolical;—you do not think of them as real spirits, like Pegasus, seen in the form of horses. But when you are told of the four riders in the Apocalypse, a distinct sense of personality begins to force itself upon you. And though you might, in a dull temper, think that (for one instance of all) the fourth rider on the pale horse was merely a symbol of the power of death,—in your stronger and more earnest moods you will rather conceive of him as a real and living angel. And when you look back from the vision of the Apocalypse to the account of the destruction of the Egyptian first-born, and of the army of Sennacherib, and again to David's vision at the threshing floor of Araunah, the idea of personality in this death-angel becomes entirely defined, just as in the appearance of the angels to Abraham, Manoah, or Mary.

Now, when you have once consented to this idea of a personal spirit, must not the question instantly follow: 'Does this spirit exercise its functions towards one race of men only, or towards all men? Was it an angel of death to the Jew only, or to the Gentile also?' You find a certain Divine agency made visible to a King of Israel, as an armed angel, executing vengeance, of which one special purpose was to lower his kingly pride. You find another (or perhaps the same) agency, made visible to a Christian prophet as an angel standing in the sun, calling to the birds that fly under heaven to come, that they may eat the flesh of kings. Is there anything impious in the thought that the same agency might have been expressed to a Greek king, or Greek seer, by similar visions?—that this figure, standing in the sun, and armed with the sword, or the bow (whose arrows were drunk with blood), and exercising especially its power in the humiliation of the proud, might, at first, have been called only 'Destroyer,' and afterwards, as the light, or sun, of justice, was recognised in the chastisement, called also 'Physician' or

‘Healer?’ If you feel hesitation in admitting the possibility of such a manifestation, I believe you will find it is caused, partly indeed by such trivial things as the difference to your ear between Greek and English terms ; but, far more, by uncertainty in your own mind respecting the nature and truth of the visions spoken of in the Bible. Have any of you intently examined the nature of your belief in them? You, for instance, Lucilla, who think often, and seriously, of such things?

LUCILLA. No ; I never could tell what to believe about them. I know they must be true in some way or other ; and I like reading about them.

L. Yes ; and I like reading about them too, Lucilla ; as I like reading other grand poetry. But, surely, we ought both to do more than like it? Will God be satisfied with us, think you, if we read His words merely for the sake of an entirely meaningless poetical sensation?

LUCILLA. But do not the people who give themselves to seek out the meaning of these things, often get very strange, and extravagant?

L. More than that, Lucilla. They often go mad. That abandonment of the mind to religious theory, or contemplation, is the very thing I have been pleading with you against. I never said you should set yourself to discover the meanings ; but you should take careful pains to understand them, so far as they *are* clear ; and you should always accurately ascertain the state of your mind about them. I want you never to read merely for the pleasure of fancy ; still less as a formal religious duty (else you might as well take to repeating Paters at once ; for it is surely wiser to repeat one thing we understand, than read a thousand which we cannot). Either, therefore, acknowledge the passages to be, for the present, unintelligible to you ; or else determine the sense in which you at present receive them ; or, at all events, the different senses between which you clearly see that you must choose. Make either your belief, or your difficulty, definite ; but do not go on, all through your life, believing nothing intelligently, and yet supposing that your having read the words

of a divine book must give you the right to despise every religion but your own. I assure you, strange as it may seem, our scorn of Greek tradition depends, not on our belief, but our disbelief, of our own traditions. We have, as yet, no sufficient clue to the meaning of either ; but you will always find that, in proportion to the earnestness of our own faith, its tendency to accept a spiritual personality increases : and that the most vital and beautiful Christian temper rests joyfully in its conviction of the multitudinous ministry of living angels, infinitely varied in rank and power. You all know one expression of the purest and happiest form of such faith, as it exists in modern times, in Richter's lovely illustrations of the Lord's Prayer. The real and living death-angel, girt as a pilgrim for journey, and softly crowned with flowers, beckons at the dying mother's door ; child-angels sit talking face to face with mortal children, among the flowers ;—hold them by their little coats, lest they fall on the stairs ;—whisper dreams of heaven to them, leaning over their pillows ; carry the sound of the church bells for them far through the air ; and even descending lower in service, fill little cups with honey, to hold out to the weary bee. By the way, Lily, did you tell the other children that story about your little sister, and Alice, and the sea ?

LILY. I told it to Alice, and to Miss Dora. I don't think I did to anybody else. I thought it wasn't worth.

L. We shall think it worth a great deal now, Lily, if you will tell it us. How old is Dotty, again ? I forget.

LILY. She is not quite three ; but she has such odd little old ways, sometimes.

L. And she was very fond of Alice ?

LILY. Yes ; Alice was so good to her always !

L. And so when Alice went away ?

LILY. Oh, it was nothing, you know, to tell about ; only it was strange at the time.

L. Well ; but I want you to tell it.

LILY. The morning after Alice had gone, Dotty was very sad and restless when she got up ; and went about, looking into all the corners, as if she could find Alice in them, and at last she came to me, and said, ' Is Alie gone over the great sea ? '

And I said, 'Yes, she is gone over the great, deep sea, but she will come back again some day.' Then Dotty looked round the room ; and I had just poured some water out into the basin ; and Dotty ran to it, and got up on a chair, and dashed her hands through the water, again and again ; and cried, 'Oh, deep, deep sea ! send little Alie back to me.'

L. Isn't that pretty, children ? There's a dear little heathen for you ! The whole heart of Greek mythology is in that ; the idea of a personal being in the elemental power ;—of its being moved by prayer ;—and of its presence everywhere, making the broken diffusion of the element sacred.

Now, remember, the measure in which we may permit ourselves to think of this trusted and adored personality, in Greek, or in any other, mythology, as conceivably a shadow of truth, will depend on the degree in which we hold the Greeks, or other great nations, equal, or inferior, in privilege and character, to the Jews, or to ourselves. If we believe that the great Father would use the imagination of the Jew as an instrument by which to exalt and lead him ; but the imagination of the Greek only to degrade and mislead him : if we can suppose that real angels were sent to minister to the Jews and to punish them ; but no angels, or only mocking spectra of angels, or even devils in the shapes of angels, to lead Lycurgus and Leonidas from desolate cradle to hopeless grave :—and if we can think that it was only the influence of spectres, or the teaching of demons, which issued in the making of mothers like Cornelia, and of sons like Cleobis and Bito, we may, of course, reject the heathen Mythology in our privileged scorn : but, at least, we are bound to examine strictly by what faults of our own it has come to pass, that the ministry of real angels among ourselves is occasionally so ineffectual, as to end in the production of Cornelias who entrust their child-jewels to Charlotte Winsors for the better keeping of them ; and of sons like that one who, the other day, in France, beat his mother to death with a stick ; and was brought in by the jury, 'guilty, with extenuating circumstances.'

MAY. Was that really possible ?

L. Yes, my dear. I am not sure that I can lay my hand

on the reference to it (and I should not have said 'the other day'—it was a year or two ago), but you may depend on the fact; and I could give you many like it, if I chose. There was a murder done in Russia, very lately, on a traveller. The murderess's little daughter was in the way, and found it out, somehow. Her mother killed her, too, and put her into the oven. There is a peculiar horror about the relations between parent and child, which are being now brought about by our variously degraded forms of European white slavery. Here is one reference, I see, in my notes on that story of Cleobis and Bito; though I suppose I marked this chiefly for its quaintness, and the beautifully Christian names of the sons; but it is a good instance of the power of the King of the Valley of Diamonds* among us.

In 'Galignani' of July 21-22, 1862, is reported a trial of a farmer's son in the department of the Yonne. The father, two years ago, at Malay le Grand, gave up his property to his two sons, on condition of being maintained by them. Simon fulfilled his agreement, but Pierre would not. The tribunal of Sens condemns Pierre to pay eighty-four francs a year to his father. Pierre replies, 'he would rather die than pay it.' Actually, returning home, he throws himself into the river, and the body is not found till next day.

. MARY. But—but—I can't tell what you would have us think. Do you seriously mean that the Greeks were better than we are; and that their gods were real angels?

L. No, my dear. I mean only that we know, in reality, less than nothing of the dealings of our Maker with our fellow-men; and can only reason or conjecture safely about them, when we have sincerely humble thoughts of ourselves and our creeds.

We owe to the Greeks every noble discipline in literature; every radical principle of art; and every form of convenient beauty in our household furniture and daily occupations of life. We are unable, ourselves, to make rational use of half that we have received from them: and, of our own, we have nothing but discoveries in science, and fine mechanical adap-

* Note vi.

tations of the discovered physical powers. On the other hand, the vice existing among certain classes, both of the rich and poor, in London, Paris, and Vienna, could have been conceived by a Spartan or Roman of the heroic ages only as possible in a Tartarus, where fiends were employed to teach, but not to punish, crime. It little becomes us to speak contemptuously of the religion of races to whom we stand in such relations; nor do I think any man of modesty or thoughtfulness will ever speak so of any religion, in which God has allowed one good man to die, trusting.

The more readily we admit the possibility of our own cherished convictions being mixed with error, the more vital and helpful whatever is right in them will become: and no error is so conclusively fatal as the idea that God will not allow us to err, though He has allowed all other men to do so. There may be doubt of the meaning of other visions, but there is none respecting that of the dream of St. Peter; and you may trust the Rock of the Church's Foundation for true interpreting, when he learned from it that, 'in every nation, he that feareth God and worketh righteousness, is accepted with Him.' See that you understand what that righteousness means; and set hand to it stoutly: you will always measure your neighbors' creed kindly, in proportion to the substantial fruits of your own. Do not think you will ever get harm by striving to enter into the faith of others, and to sympathise, in imagination, with the guiding principles of their lives. So only can you justly love them, or pity them, or praise. By the gracious effort you will double, treble—nay, indefinitely multiply, at once the pleasure, the reverence, and the intelligence with which you read: and, believe me, it is wiser and holier, by the fire of your own faith to kindle the ashes of expired religions, than to let your soul shiver and stumble among their graves, through the gathering darkness, and communicable cold.

MARY (*after some pause*). We shall all like reading Greek history so much better after this! but it has put everything else out of our heads that we wanted to ask.

L. I can tell you one of the things; and I might take

credit for generosity in telling you ; but I have a personal reason—Lucilla's verse about the creation.

DORA. Oh, yes—yes ; and its 'pain together, until now.'

L. I call you back to that, because I must warn you against an old error of my own. Somewhere in the fourth volume of 'Modern Painters,' I said that the earth seemed to have passed through its highest state : and that, after ascending by a series of phases, culminating in its habitation by man, it seems to be now gradually becoming less fit for that habitation.

MARY. Yes, I remember.

L. I wrote those passages under a very bitter impression of the gradual perishing of beauty from the loveliest scenes which I knew in the physical world ;—not in any doubtful way, such as I might have attributed to loss of sensation in myself—but by violent and definite physical action ; such as the filling up of the Lac de Chêde by landslips from the Rochers des Fiz ;—the narrowing of the Lake Lucerne by the gaining delta of the stream of the Muotta-Thal, which, in the course of years, will cut the lake into two, as that of Brienz has been divided from that of Thun ;—the steady diminishing of the glaciers north of the Alps, and still more, of the sheets of snow on their southern slopes, which supply the refreshing streams of Lombardy :—the equally steady increase of deadly maremma round Pisa and Venice ; and other such phenomena, quite measurably traceable within the limits even of short life, and unaccompanied, as it seemed, by redeeming or compensatory agencies. I am still under the same impression respecting the existing phenomena ; but I feel more strongly, every day, that no evidence to be collected within historical periods can be accepted as any clue to the great tendencies of geological change ; but that the great laws which never fail, and to which all change is subordinate, appear such as to accomplish a gradual advance to lovelier order, and more calmly, yet more deeply, animated Rest. Nor has this conviction ever fastened itself upon me more distinctly, than during my endeavour to trace the laws which govern the lowly framework of the dust. For, through all the phases of its transition and

dissolution, there seems to be a continual effort to raise itself into a higher state ; and a measured gain, through the fierce revulsion and slow renewal of the earth's frame, in beauty, and order, and permanence. The soft white sediments of the sea draw themselves, in process of time, into smooth knots of sphered symmetry ; burdened and strained under increase of pressure, they pass into a nascent marble ; scorched by fervent heat, they brighten and blanch into the snowy rock of Paros and Carrara. The dark drift of the inland river, or stagnant slime of inland pool and lake, divides, or resolves itself as it dries, into layers of its several elements ; slowly purifying each by the patient withdrawal of it from the anarchy of the mass in which it was mingled. Contracted by increasing drought, till it must shatter into fragments, it infuses continually a finer ichor into the opening veins, and finds in its weakness the first rudiments of a perfect strength. Rent at last, rock from rock, nay, atom from atom, and tormented in lambent fire, it knits, through the fusion, the fibres of a perennial endurance ; and, during countless subsequent centuries, declining, or rather let me say, rising to repose, finishes the infallible lustre of its crystalline beauty, under harmonies of law which are wholly beneficent, because wholly inexorable.

(The children seem pleased, but more inclined to think over these matters than to talk.)

L. *(after giving them a little time)*. Mary, I seldom ask you to read anything out of books of mine ; but there is a passage about the Law of Help, which I want you to read to the children now, because it is of no use merely to put it in other words for them. You know the place I mean, do not you ?

MARY. Yes *(presently finding it)* ; where shall I begin ?

L. Here ; but the elder ones had better look afterwards at the piece which comes just before this.

MARY *(reads)* :

'A pure or holy state of anything is that in which all its parts are helpful or consistent. The highest and first law of the universe, and the other name of life, is therefore, "help." The other name of death is "separation." Government and

co-operation are in all things, and eternally, the laws of life. Anarchy and competition, eternally, and in all things, the laws of death.

‘Perhaps the best, though the most familiar, example we could take of the nature and power of consistence, will be that of the possible changes in the dust we tread on.

‘Exclusive of animal decay, we can hardly arrive at a more absolute type of impurity, than the mud or slime of a damp, over-trodden path, in the outskirts of a manufacturing town. I do not say mud of the road, because that is mixed with animal refuse ; but take merely an ounce or two of the blackest slime of a beaten footpath, on a rainy day, near a manufacturing town. That slime we shall find in most cases composed of clay (or brickdust, which is burnt clay), mixed with soot, a little sand and water. All these elements are at helpless war with each other, and destroy reciprocally each other’s nature and power : competing and fighting for place at every tread of your foot ; sand squeezing out clay, and clay squeezing out water, and soot meddling everywhere, and defiling the whole. Let us suppose that this ounce of mud is left in perfect rest, and that its elements gather together, like to like, so that their atoms may get into the closest relations possible.

‘Let the clay begin. Ridding itself of all foreign substance, it gradually becomes a white earth, already very beautiful, and fit, with help of congealing fire, to be made into finest porcelain, and painted on, and be kept in kings’ palaces. But such artificial consistence is not its best. Leave it still quiet, to follow its own instinct of unity, and it becomes, not only white but clear ; not only clear, but hard ; nor only clear and hard, but so set that it can deal with light in a wonderful way, and gather out of it the loveliest blue rays only, refusing the rest. We call it then a sapphire.

‘Such being the consummation of the clay, we give similar permission of quiet to the sand. It also becomes, first, a white earth ; then proceeds to grow clear and hard, and at last arranges itself in mysterious, infinitely fine parallel lines, which have the power of reflecting, not merely the blue rays, but the blue, green, purple, and red rays, in the greatest beauty in which they can be seen through any hard material whatsoever. We call it then an opal.

‘In next order the soot sets to work. It cannot make itself white at first ; but, instead of being discouraged, tries harder and harder ; and comes out clear at last ; and the hardest

thing in the world: and for the blackness that it had, obtains in exchange the power of reflecting all the rays of the sun at once, in the vividest blaze that any solid thing can shoot. We call it then a diamond.

‘Last of all, the water purifies, or unites itself; contented enough if it only reach the form of a dewdrop: but, if we insist on its proceeding to a more perfect consistence, it crystallises into the shape of a star. And, for the ounce of slime which we had by political economy of competition, we have, by political economy of co-operation, a sapphire, an opal, and a diamond, set in the midst of a star of snow.’

L. I have asked you to hear that, children, because, from all that we have seen in the work and play of these past days, I would have you gain at least one grave and enduring thought. The seeming trouble,—the unquestionable degradation,—of the elements of the physical earth, must passively wait the appointed time of their repose, or their restoration. It can only be brought about for them by the agency of external law. But if, indeed, there be a nobler life in us than in these strangely moving atoms;—if, indeed, there is an eternal difference between the fire which inhabits them, and that which animates us,—it must be shown, by each of us in his appointed place, not merely in the patience, but in the activity of our hope; not merely by our desire, but our labour, for the time when the Dust of the generations of men shall be confirmed for foundations of the gates of the city of God. The human clay, now trampled and despised, will not be,—cannot be,—knit into strength and light by accident or ordinances of unassisted fate. By human cruelty and iniquity it has been afflicted;—by human mercy and justice it must be raised: and, in all fear or questioning of what is or is not, the real message of creation, or of revelation, you may assuredly find perfect peace, if you are resolved to do that which your Lord has plainly required,—and content that He should indeed require no more of you,—than to do Justice, to love Mercy, and to walk humbly with Him.

NOTES.

NOTE I.

Page 24.

'That third pyramid of hers.'

THROUGHOUT the dialogues, it must be observed that 'Sibyl' is addressed (when in play) as having once been the Cumæan Sibyl; and 'Egypt' as having been queen Nitocris,—the Cinderella, and 'the greatest heroine and beauty' of Egyptian story. The Egyptians called her 'Neith the Victorious' (Nitocris), and the Greeks 'Face of the Rose' (Rhodope). Chaucer's beautiful conception of Cleopatra in the 'Legend of Good Women,' is much more founded on the traditions of her than on those of Cleopatra; and, especially in its close, modified by Herodotus's terrible story of the death of Nitocris, which, however, is mythologically nothing more than a part of the deep monotonous ancient dirge for the fulfilment of the earthly destiny of Beauty; 'She cast herself into a chamber full of ashes.'

I believe this Queen is now sufficiently ascertained to have either built, or increased to double its former size, the third pyramid of Gizeh: and the passage following in the text refers to an imaginary endeavour, by the Old Lecturer and the children together, to make out the description of that pyramid in the 167th page of the second volume of Bunsen's 'Egypt's Place in Universal History'—ideal endeavour,—which ideally terminates as the Old Lecturer's real endeavours to the same end always have terminated. There are, however, valuable notes respecting Nitocris at page 210 of the same volume: but the 'Early Egyptian History for the Young,' by the author of Sidney Gray, contains, in a pleasant form, as much information as young readers will usually need.

NOTE II.

Page 25.

'Pyramid of Asychis.'

THIS pyramid, in mythology, divides with the Tower of Babel the shame, or vain glory, of being presumptuously, and first among great edifices, built with 'brick for stone.' This was the inscription on it, according to Herodotus:—

‘Despise me not, in comparing me with the pyramids of stone ; for I have the pre-eminence over them, as far as Jupiter has pre-eminence over the gods. For, striking with staves into the pool, men gathered the clay which fastened itself to the staff, and kneaded bricks out of it, and so made me.’

The word I have translated ‘kneaded’ is literally ‘drew ;’ in the sense of drawing, for which the Latins used ‘duco ;’ and thus gave us our ‘ductile’ in speaking of dead clay, and Duke, Doge, or leader, in speaking of living clay. As the asserted pre-eminence of the edifice is made, in this inscription, to rest merely on the quantity of labour consumed in it, this pyramid is considered, in the text, as the type, at once, of the base building, and of the lost labour, of future ages, so far at least as the spirits of measured and mechanical effort deal with it : but Neith, exercising her power upon it, makes it a type of the work of wise and inspired builders.

NOTE III.

Page 25.

‘*The Greater Pthah.*’

It is impossible, as yet, to define with distinctness the personal agencies of the Egyptian deities. They are continually associated in function, or hold derivative powers, or are related to each other in mysterious triads ; uniting always symbolism of physical phenomena with real spiritual power. I have endeavoured partly to explain this in the text of the tenth Lecture : here, it is only necessary for the reader to know that the Greater Pthah more or less represents the formative power of order and measurement : he always stands on a four-square pedestal, ‘the Egyptian cubit, metaphorically used as the hieroglyphic for truth ;’ his limbs are bound together, to signify fixed stability, as of a pillar ; he has a measuring-rod in his hand ; and at Philæ, is represented as holding an egg on a potter’s wheel ; but I do not know if this symbol occurs in older sculptures. His usual title is the ‘Lord of Truth.’ Others, very beautiful : ‘King of the Two Worlds, of Gracious Countenance,’ ‘Superintendent of the Great Abode,’ &c., are given by Mr. Birch in Arundale’s ‘Gallery of Antiquities,’ which I suppose is the book of best authority easily accessible. For the full titles and utterances of the gods, Rosellini is as yet the only—and I believe, still a very questionable—authority ; and Arundale’s little book, excellent in the text, has this great defect, that its drawings give the statues invariably a ludicrous or ignoble character. Readers who have not access to the originals must be warned against this frequent fault in modern illustration (especially existing also in some of the painted casts of Gothic and Norman

work at the Crystal Palace). It is not owing to any wilful want of veracity: the plates in Arundale's book are laboriously faithful: but the expressions of both face and body in a figure depend merely on emphasis of touch; and, in barbaric art, most draughtsmen emphasise what they plainly see—the barbarism; and miss conditions of nobleness which they must approach the monument in a different temper before they will discover, and draw with great subtlety before they can express.

The character of the Lower Pthah, or perhaps I ought rather to say, of Pthah in his lower office is sufficiently explained in the text of the third Lecture; only the reader must be warned that the Egyptian symbolism of him by the beetle was not a scornful one; it expressed only the idea of his presence in the first elements of life. But it may not unjustly be used, in another sense, by us, who have seen his power in new development; and, even as it was, I cannot conceive that the Egyptians should have regarded their beetle-headed image of him (Champollion, 'Pantheon,' pl. 12), without some occult scorn. It is the most painful of all their types of any beneficent power; and even among those of evil influences none can be compared with it, except its opposite, the tortoise-headed demon of indolence.

Pasht (p. 24, line 32) is connected with the Greek Artemis, especially in her offices of judgment and vengeance. She is usually lioness-headed; sometimes cat-headed; her attributes seeming often trivial or ludicrous unless their full meaning is known; but the enquiry is much too wide to be followed here. The cat was sacred to her; or rather to the sun, and secondarily to her. She is alluded to in the text because she is always the companion of Pthah (called 'the beloved of Pthah,' it may be as Judgment, demanded and longed for by Truth); and it may be well for young readers to have this fixed in their minds, even by chance association. There are more statues of Pasht in the British Museum than of any other Egyptian deity: several of them fine in workmanship; nearly all in dark stone, which may be, presumably, to connect her, as the moon, with the night; and in her office of avenger, with grief.

Thoth (p. 27, line 17), is the Recording Angel of Judgment; and the Greek Hermes Phre (line 20), is the Sun.

Neith is the Egyptian spirit of divine wisdom; and the Athena of the Greeks. No sufficient statement of her many attributes, still less of their meanings, can be shortly given; but this should be noted respecting the veiling of the Egyptian image of her by vulture wings—that as she is, physically, the goddess of the air, this bird, the most powerful creature of the air known to the Egyptians, naturally became her symbol. It had other significations; but certainly this, when in connection with Neith. As representing her, it was the most important sign, next to the winged sphere, in Egyptian sculpture; and, just as in Homer, Athena

herself guides her heroes into battle, this symbol of wisdom, giving victory, floats over the heads of the Egyptian kings. The Greeks, representing the goddess herself in human form, yet would not lose the power of the Egyptian symbol, and changed it into an angel of victory. First seen in loveliness on the early coins of Syracuse and Leontium, it gradually became the received sign of all conquest, and the so-called 'Victory' of later times; which, little by little, loses its truth, and is accepted by the moderns only as a personification of victory itself,—not as an actual picture of the living Angel who led to victory. There is a wide difference between these two conceptions,—all the difference between insincere poetry, and sincere religion. This I have also endeavoured farther to illustrate in the tenth Lecture; there is however one part of Athena's character which it would have been irrelevant to dwell upon there; yet which I must not wholly leave unnoticed.

As the goddess of the air, she physically represents both its beneficent calm, and necessary tempest: other storm-deities (as Chrysaor and Æolus) being invested with a subordinate and more or less malignant function, which is exclusively their own, and is related to that of Athena as the power of Mars is related to hers in war. So also Virgil makes her able to wield the lightning herself, while Juno cannot, but must pray for the intervention of Æolus. She has precisely the correspondent moral authority over calmness of mind, and just anger. She soothes Achilles, as she incites Tydides; her physical power over the air being always hinted correlatively. She grasps Achilles by his hair—as the wind would lift it—softly,

‘It fanned his cheek, it raised his hair,
Like a meadow gale in spring.’

She does not merely turn the lance of Mars from Diomed; but seizes it in both her hands, and casts it aside, with a sense of making it vain, like chaff in the wind;—to the shout of Achilles, she adds her own voice of storm in heaven—but in all cases the moral power is still the principal one—most beautifully in that seizing of Achilles by the hair, which was the talisman of his life (because he had vowed it to the Sperchius if he returned in safety), and which, in giving at Patroclus' tomb, he, knowingly, yields up the hope of return to his country, and signifies that he will die with his friend. Achilles and Tydides are, above all other heroes, aided by her in war, because their prevailing characters are the desire of justice, united in both with deep affections; and, in Achilles, with a passionate tenderness, which is the real root of his passionate anger. Ulysses is her favourite chiefly in her office as the goddess of conduct and design.

NOTE IV.

Page 54.

'Geometrical limitations.'

It is difficult, without a tedious accuracy, or without full illustration, to express the complete relations of crystalline structure, which dispose minerals to take, at different times, fibrous, massive, or foliated forms; and I am afraid this chapter will be generally skipped by the reader: yet the arrangement itself will be found useful, if kept broadly in mind; and the transitions of state are of the highest interest, if the subject is entered upon with any earnestness. It would have been vain to add to the scheme of this little volume any account of the geometrical forms of crystals: an available one, though still far too difficult and too copious, has been arranged by the Rev. Mr. Mitchell, for Orr's 'Circle of the Sciences'; and, I believe, the 'nets' of crystals, which are therein given to be cut out with scissors and put prettily together, will be found more conquerable by young ladies than by other students. They should also, when an opportunity occurs, be shown, at any public library, the diagram of the crystallisation of quartz referred to poles, at p. 8 of Cloizaux's 'Manuel de Minéralogie': that they may know what work is; and what the subject is.

With a view to more careful examination of the nascent states of silica, I have made no allusion in this volume to the influence of mere segregation, as connected with the crystalline power. It has only been recently, during the study of the breccias alluded to in page 113, that I have fully seen the extent to which this singular force often modifies rocks in which at first its influence might hardly have been suspected; many apparent conglomerates being in reality formed chiefly by segregation, combined with mysterious brokenly-zoned structures, like those of some malachites. I hope some day to know more of these and several other mineral phenomena (especially of those connected with the relative sizes of crystals), which otherwise I should have endeavoured to describe in this volume.

NOTE V.

Page 102.

'St. Barbara.'

I WOULD have given the legends of St. Barbara, and St. Thomas, if I had thought it always well for young readers to have everything at once told them which they may wish to know. They will remember the stories better after taking some trouble to find them; and the text is in-

telligible enough as it stands. The idea of St. Barbara, as there given, is founded partly on her legend in Peter de Natalibus, partly on the beautiful photograph of Van Eyck's picture of her at Antwerp: which was some time since published at Lille.

NOTE VI.

Page 137.

'King of the Valley of Diamonds.'

ISABEL interrupted the Lecturer here, and was briefly bid to hold her tongue; which gave rise to some talk, apart, afterwards, between L. and Sibyl, of which a word or two may be perhaps advisably set down.

SIBYL. We shall spoil Isabel, certainly, if we don't mind: I was glad you stopped her, and yet sorry; for she wanted so much to ask about the Valley of Diamonds again, and she has worked so hard at it, and made it nearly all out by herself. She recollected Elisha's throwing in the meal, which nobody else did.

L. But what did she want to ask?

SIBYL. About the mulberry trees and the serpents; we are all stopped by that. Won't you tell us what it means?

L. Now, Sibyl, I am sure you, who never explained yourself, should be the last to expect others to do so. I hate explaining myself.

SIBYL. And yet how often you complain of other people for not saying what they meant. How I have heard you growl over the three stone steps to purgatory; for instance!

L. Yes; because Dante's meaning is worth getting at; but mine matters nothing: at least, if ever I think it is of any consequence, I speak it as clearly as may be. But you may make anything you like of the serpent forests. I could have helped you to find out what they were, by giving a little more detail, but it would have been tiresome.

SIBYL. It is much more tiresome not to find out. Tell us, please, as Isabel says, because we feel so stupid.

L. There is no stupidity; you could not possibly do more than guess at anything so vague. But I think, you, Sibyl, at least, might have recollected what first dyed the mulberry?

SIBYL. So I did; but that helped little; I thought of Dante's forest of suicides, too, but you would not simply have borrowed that?

L. No. If I had had strength to use it, I should have stolen it, to beat into another shape; not borrowed it. But that idea of souls in trees is as old as the world; or at least, as the world of man. And I *did* mean that there were souls in those dark branches; the souls of all those who had perished in misery through the pursuit of riches; and that the river was of their blood, gathering gradually, and flowing out

of the valley. That I meant the serpents for the souls of those who had lived carelessly and wantonly in their riches ; and who have all their sins forgiven by the world, because they are rich : and therefore they have seven crimson-crested heads, for the seven mortal sins ; of which they are proud : and these, and the memory and report of them, are the chief causes of temptation to others, as showing the pleasantness and absolving power of riches ; so that thus they are singing serpents. And the worms are the souls of the common money-getters and traffickers, who do nothing but eat and spin : and who gain habitually by the distress or foolishness of others (as you see the butchers have been gaining out of the panic at the cattle plague, among the poor),—so they are made to eat the dark leaves, and spin, and perish.

SIBYL. And the souls of the great, cruel, rich people who oppress the poor, and lend money to government to make unjust war, where are they ?

L. They change into the ice, I believe, and are knit with the gold ; and make the grave-dust of the valley. I believe so, at least, for no one ever sees those souls anywhere.

(SIBYL ceases questioning.)

ISABEL (*who has crept up to her side without any one's seeing*). Oh, Sibyl, please ask him about the fire-flies !

L. What, you there, mousie ! No ; I won't tell either Sibyl or you about the fire-flies ; nor a word more about anything else. You ought to be little fire-flies yourselves, and find your way in twilight by your own wits.

ISABEL. But you said they burned, you know ?

L. Yes ; and you may be fire-flies that way too, some of you, before long, though I did not mean that. Away with you, children. You have thought enough for to day.

NOTE TO SECOND EDITION.

Sentence out of letter from May (who is staying with Isabel just now at Cassel), dated 15th June, 1877 :—

“ I am reading the *Éthics* with a nice Irish girl who is staying here, and she's just as puzzled as I've always been about the fire-flies, and we both want to know so much.—Please be a very nice old Lecturer, and tell us, won't you ? ”

Well, May, you never were a vain girl ; so could scarcely guess that I meant them for the light, unpursued vanities, which yet blind us, confused among the stars. One evening, as I came late into Siena, the fire-flies were flying high on a stormy sirocco wind,—the stars themselves no brighter, and all their host seeming, at moments, to fade as the insects faded.

FICTION

FAIR AND FOUL

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FICTION—FAIR AND FOUL.

ON the first mild—or, at least, the first bright—day of March, in this year, I walked through what was once a country lane, between the hostelry of the Half-moon at the bottom of Herne Hill, and the secluded College of Dulwich.

In my young days, Croxsted Lane was a green bye-road traversable for some distance by carts; but rarely so traversed, and, for the most part, little else than a narrow strip of untilled field, separated by blackberry hedges from the better cared-for meadows on each side of it: growing more weeds, therefore, than they, and perhaps in spring a primrose or two—white archangel—daisies plenty, and purple thistles in autumn. A slender rivulet, boasting little of its brightness, for there are no springs at Dulwich, yet fed purely enough by the rain and morning dew, here trickled—there loitered—through the long grass beneath the hedges, and expanded itself, where it might, into moderately clear and deep pools, in which, under their veils of duck-weed, a freshwater shell or two, sundry curious little skipping shrimps, any quantity of tadpoles in their time, and even sometimes a tittlebat, offered themselves to my boyhood's pleased, and not inaccurate, observation. There, my mother and I used to gather the first buds of the hawthorn; and there, in after years, I used to walk in the summer shadows, as in a place wilder and sweeter than our garden, to think over any passage I wanted to make better than usual in *Modern Painters*.

So, as aforesaid, on the first kindly day of this year, being thoughtful more than usual of those old times, I went to look again at the place.

Often, both in those days, and since, I have put myself hard to it, vainly, to find words wherewith to tell of beautiful things; but beauty has been in the world since the world was made, and human language can make a shift, somehow, to give account of it, whereas the peculiar forces of devastation induced by modern city life have only entered the world lately; and no existing terms of language known to me are enough to describe the forms of filth, and modes of ruin, that varied themselves along the course of Croxsted Lane. The fields on each side of it are now mostly dug up for building, or cut through into gaunt corners and nooks of blind ground by the wild crossings and concurrencies of three railroads. Half a dozen handfuls of new cottages, with Doric doors, are dropped about here and there among the gashed ground: the lane itself, now entirely grassless, is a deep-rutted, heavy-hillocked cart-road, diverging gatelessly into various brick-fields or pieces of waste; and bordered on each side by heaps of—Hades only knows what!—mixed dust of every unclean thing that can crumble in drought, and mildew of every unclean thing that can rot or rust in damp: ashes and rags, beer-bottles and old shoes, battered pans, smashed crockery, shreds of nameless clothes, door-sweepings, floor-sweepings, kitchen garbage, back-garden sewage, old iron, rotten timber jagged with out-torn nails, cigar-ends, pipe-bowls, cinders, bones, and ordure, indescribable; and, variously kneaded into, sticking to, or fluttering foully here and there over all these,—remnants broadcast, of every manner of newspaper, advertisement or big-lettered bill, festering and flaunting out their last publicity in the pits of stinking dust and mortal slime.

The lane ends now where its prettiest windings once began; being cut off by a cross-road leading out of Dulwich to a minor railway station: and on the other side of this road, what was of old the daintiest intricacy of its solitude is changed into a straight, and evenly macadamised carriage drive, between new houses of extreme respectability, with good attached gardens and offices—most of these tenements being larger—all more pretentious, and many, I imagine, held at greatly higher rent than my father's, tenanted for twenty years at Herne Hill.

And it became matter of curious meditation to me what must here become of children resembling my poor little dreamy quondam self in temper, and thus brought up at the same distance from London, and in the same or better circumstances of worldly fortune ; but with only Croxsted Lane in its present condition for their country walk. The trimly kept road before their doors, such as one used to see in the fashionable suburbs of Cheltenham or Leamington, presents nothing to their study but gravel, and gas-lamp posts ; the modern addition of a vermilion letter-pillar contributing indeed to the splendour, but scarcely to the interest of the scene ; and a child of any sense or fancy would hastily contrive escape from such a barren desert of politeness, and betake itself to investigation, such as might be feasible, of the natural history of Croxsted Lane.

But, for its sense or fancy, what food, or stimulus, can it find, in that foul causeway of its youthful pilgrimage ? What would have happened to myself, so directed, I cannot clearly imagine. Possibly, I might have got interested in the old iron and wood-shavings ; and become an engineer or a carpenter : but for the children of to-day, accustomed from the instant they are out of their cradles, to the sight of this infinite nastiness, prevailing as a fixed condition of the universe, over the face of nature, and accompanying all the operations of industrious man, what is to be the scholastic issue ? unless, indeed, the thrill of scientific vanity in the primary analysis of some unheard-of process of corruption—or the reward of microscopic research in the sight of worms with more legs, and acari of more curious generation than ever vivified the more simply smelling plasma of antiquity.

One result of such elementary education is, however, already certain ; namely, that the pleasure which we may conceive taken by the children of the coming time, in the analysis of physical corruption, guides, into fields more dangerous and desolate, the expatiation of imaginative literature : and that the reactions of moral disease upon itself, and the conditions of languidly monstrous character developed in an atmosphere of low vitality, have become the most valued material of mod-

ern fiction, and the most eagerly discussed texts of modern philosophy.

The many concurrent reasons for this mischief may, I believe, be massed under a few general heads.

I. There is first the hot fermentation and unwholesome secrecy of the population crowded into large cities, each mote in the misery lighter, as an individual soul, than a dead leaf, but becoming oppressive and infectious each to his neighbour, in the smoking mass of decay. The resulting modes of mental ruin and distress are continually new; and in a certain sense, worth study in their monstrosity: they have accordingly developed a corresponding science of fiction, concerned mainly with the description of such forms of disease, like the botany of leaf-lichens.

In De Balzac's story of *Father Goriot*, a grocer makes a large fortune, of which he spends on himself as much as may keep him alive; and on his two daughters, all that can promote their pleasures or their pride. He marries them to men of rank, supplies their secret expenses, and provides for his favourite a separate and clandestine establishment with her lover. On his deathbed, he sends for this favourite daughter, who wishes to come, and hesitates for a quarter of an hour between doing so, and going to a ball at which it has been for the last month her chief ambition to be seen. She finally goes to the ball.

This story is, of course, one of which the violent contrasts and spectral catastrophe could only take place, or be conceived, in a large city. A village grocer cannot make a large fortune, cannot marry his daughters to titled squires, and cannot die without having his children brought to him, if in the neighbourhood, by fear of village gossip, if for no better cause.

II. But a much more profound feeling than this mere curiosity of science in morbid phenomena is concerned in the production of the carefulest forms of modern fiction. The disgrace and grief resulting from the mere trampling pressure and electric friction of town life, become to the sufferers peculiarly mysterious in their undeservedness, and frightful

in their inevitableness. The power of all surroundings over them for evil ; the incapacity of their own minds to refuse the pollution, and of their own wills to oppose the weight, of the staggering mass that chokes and crushes them into perdition, brings every law of healthy existence into question with them, and every alleged method of help and hope into doubt. Indignation, without any calming faith in justice, and self-contempt, without any curative self-reproach, dull the intelligence, and degrade the conscience, into sullen incredulity of all sunshine outside the dunghill, or breeze beyond the wafting of its impurity ; and at last a philosophy develops itself, partly satiric, partly consolatory, concerned only with the regenerative vigour of manure, and the necessary obscurities of fimetic Providence ; showing how everybody's fault is somebody else's, how infection has no law, digestion no will, and profitable dirt no dishonour.

And thus an elaborate and ingenious scholasticism, in what may be called the Divinity of Decomposition, has established itself in connection with the more recent forms of romance, giving them at once a complacent tone of clerical dignity, and an agreeable dash of heretical impudence ; while the inculcated doctrine has the double advantage of needing no laborious scholarship for its foundation, and no painful self-denial for its practice.

III. The monotony of life in the central streets of any great modern city, but especially in those of London, where every emotion intended to be derived by men from the sight of nature, or the sense of art, is forbidden for ever, leaves the craving of the heart for a sincere, yet changeful, interest, to be fed from one source only. Under natural conditions the degree of mental excitement necessary to bodily health is provided by the course of the seasons, and the various skill and fortune of agriculture. In the country every morning of the year brings with it a new aspect of springing or fading nature ; a new duty to be fulfilled upon earth, and a new promise or warning in heaven. No day is without its innocent hope, its special prudence, its kindly gift, and its sublime danger ; and in every process of wise husbandry, and every

effort of contending or remedial courage, the wholesome passions, pride, and bodily power of the labourer are excited and exerted in happiest unison. The companionship of domestic, the care of serviceable, animals, soften and enlarge his life with lowly charities, and discipline him in familiar wisdoms and unboastful fortitudes ; while the divine laws of seed-time which cannot be recalled, harvest which cannot be hastened, and winter in which no man can work, compel the impatiences and coveting of his heart into labour too submissive to be anxious, and rest too sweet to be wanton. What thought can enough comprehend the contrast between such life, and that in streets where summer and winter are only alternations of heat and cold ; where snow never fell white, nor sunshine clear ; where the ground is only a pavement, and the sky no more than the glass roof of an arcade ; where the utmost power of a storm is to choke the gutters, and the finest magic of spring, to change mud into dust : where—chief and most fatal difference in state, there is no interest of occupation for any of the inhabitants but the routine of counter or desk within doors, and the effort to pass each other without collision outside ; so that from morning to evening the only possible variation of the monotony of the hours, and lightening of the penalty of existence, must be some kind of mischief, limited, unless by more than ordinary godsend of fatality, to the fall of a horse, or the slitting of a pocket.

I said that under these laws of inanition, the craving of the human heart for some kind of excitement could be supplied from *one* source only. It might have been thought by any other than a sternly tentative philosopher, that the denial of their natural food to human feelings would have provoked a reactionary desire for it ; and that the dreariness of the street would have been gilded by dreams of pastoral felicity. Experience has shown the fact to be otherwise ; the thoroughly trained Londoner can enjoy no other excitement than that to which he has been accustomed, but asks for *that* in continually more ardent or more virulent concentration ; and the ultimate power of fiction to entertain him is by varying to his fancy the modes, and defining for his dulness the horrors, of

Death. In the single novel of *Bleak House* there are nine deaths (or left for death's, in the drop scene) carefully wrought out or led up to, either by way of pleasing surprise, as the baby's at the brickmaker's, or finished in their threatenings and sufferings, with as much enjoyment as can be contrived in the anticipation, and as much pathology as can be concentrated in the description. Under the following varieties of method :—

One by assassination	Mr. Tulkinghorn.
One by starvation, with phthisis	Joe.
One by chagrin	Richard.
One by spontaneous combustion	Mr. Krook.
One by sorrow	Lady Dedlock's lover.
One by remorse	Lady Dedlock.
One by insanity	Miss Flite.
One by paralysis	Sir Leicester.

Besides the baby, by fever, and a lively young Frenchwoman left to be hanged.

And all this, observe, not in a tragic, adventurous, or military story, but merely as the further enlivenment of a narrative intended to be amusing ; and as a properly representative average of the statistics of civilian mortality in the centre of London.

Observe further, and chiefly. It is not the mere number of deaths (which, if we count the odd troopers in the last scene, is exceeded in *Old Mortality*, and reached, within one or two, both in *Waverley* and *Guy Mannering*) that marks the peculiar tone of the modern novel. It is the fact that all these deaths, but one, are of inoffensive, or at least in the world's estimate respectable persons ; and that they are all grotesquely either violent or miserable, purporting thus to illustrate the modern theology that the appointed destiny of a large average of our population is to die like rats in a drain, either by trap or poison. Not, indeed, that a lawyer in full practice can be usually supposed as faultless in the eye of heaven as a dove or a woodcock ; but it is not, in former divinities, thought the

will of Providence that he should be dropped by a shot from a client behind his fire-screen, and retrieved in the morning by his housemaid under the chandelier. Neither is Lady Dedlock less reprehensible in her conduct than many women of fashion have been and will be: but it would not therefore have been thought poetically just, in old-fashioned morality, that she should be found by her daughter lying dead, with her face in the mud of a St. Giles's churchyard.

In the work of the great masters death is always either heroic, deserved, or quiet and natural (unless their purpose be totally and deeply tragic, when collateral meaner death is permitted, like that of Polonius or Roderigo). In *Old Mortality*, four of the deaths, Bothwell's, Ensign Grahame's, Macbriar's, and Evandale's, are magnificently heroic; Burley's and Oliphant's long deserved, and swift; the troopers', met in the discharge of their military duty, and the old miser's, as gentle as the passing of a cloud, and almost beautiful in its last words of—now unselfish—care.

'Ailie' (he aye ca'd me Ailie, we were auld acquaintance,) 'Ailie, take ye care and haud the gear weel thegither; for the name of Morton of Milnwood's gane out like the last sough of an auld sang.' And sae he fell out o' ae dwain into another, and ne'er spak a word mair, unless it were something we cou'dna mak out, about a dipped candle being gude enough to see to dee wi'. He cou'd ne'er bide to see a moulded ane, and there was ane, by ill luck, on the table.

In *Guy Mannering*, the murder, though unpremeditated, of a single person, (himself not entirely innocent, but at least by heartlessness in a cruel function earning his fate,) is avenged to the uttermost on all the men conscious of the crime; Mr. Bertram's death, like that of his wife, brief in pain, and each told in the space of half-a-dozen lines; and that of the heroine of the tale, self-devoted, heroic in the highest, and happy.

Nor is it ever to be forgotten, in the comparison of Scott's with inferior work, that his own splendid powers were, even in early life, tainted, and in his latter years destroyed, by modern conditions of commercial excitement, then first, but

rapidly, developing themselves. There are parts even in his best novels coloured to meet tastes which he despised ; and many pages written in his later ones to lengthen his article for the indiscriminate market.

But there was one weakness of which his healthy mind remained incapable to the last. In modern stories prepared for more refined or fastidious audiences than those of Dickens, the funereal excitement is obtained, for the most part, not by the infliction of violent or disgusting death ; but in the suspense, the pathos, and the more or less by all felt, and recognised, mortal phenomena of the sick-room. The temptation, to weak writers, of this order of subject is especially great, because the study of it from the living—or dying—model is so easy, and to many has been the most impressive part of their own personal experience ; while, if the description be given even with mediocre accuracy, a very large section of readers will admire its truth, and cherish its melancholy. Few authors of second or third rate genius can either record or invent a probable conversation in ordinary life ; but few, on the other hand, are so destitute of observant faculty as to be unable to chronicle the broken syllables and languid movements of an invalid. The easily rendered, and too surely recognised, image of familiar suffering is felt at once to be real where all else had been false ; and the historian of the gestures of fever and words of delirium can count on the applause of a gratified audience as surely as the dramatist who introduces on the stage of his flagging action a carriage that can be driven or a fountain that will flow. But the masters of strong imagination disdain such work, and those of deep sensibility shrink from it.¹ Only under conditions of personal weakness, presently to be noted, would Scott comply with the cravings of his lower audience in scenes of terror like the death of Front-de-Bœuf. But he never once withdrew the

¹ Nell, in the *Old Curiosity Shop*, was simply killed for the market, as a butcher kills a lamb (see *Forster's Life*), and Paul was written under the same conditions of illness which affected Scott—a part of the ominous palsies, grasping alike author and subject, both in *Dombey* and *Little Dorrit*.

sacred curtain of the sick-chamber, nor permitted the disgrace of wanton tears round the humiliation of strength, or the wreck of beauty.

IV. No exception to this law of reverence will be found in the scenes in *Cœur de Lion*'s illness introductory to the principal incident in the *Talisman*. An inferior writer would have made the king charge in imagination at the head of his chivalry, or wander in dreams by the brooks of Aquitaine; but Scott allows us to learn no more startling symptoms of the king's malady than that he was restless and impatient, and could not wear his armour. Nor is any bodily weakness, or crisis of danger, permitted to disturb for an instant the royalty of intelligence and heart in which he examines, trusts and obeys the physician whom his attendants fear.

Yet the choice of the main subject in this story and its companion—the trial, to a point of utter torture, of knightly faith, and several passages in the conduct of both, more especially the exaggerated scenes in the House of Baldringham, and hermitage of Engedi, are signs of the gradual decline in force of intellect and soul which those who love Scott best have done him the worst injustice in their endeavours to disguise or deny. The mean anxieties, moral humiliations, and mercilessly demanded brain-toil, which killed him, show their sepulchral grasp for many and many a year before their final victory; and the states of more or less dulled, distorted, and polluted imagination which culminate in *Castle Dangerous*, cast a Stygian hue over *St. Ronan's Well*, *The Fair Maid of Perth*, and *Anne of Geierstein*, which lowers them, the first altogether, the other two at frequent intervals, into fellowship with the normal disease which festers throughout the whole body of our lower fictitious literature.

Fictitious! I use the ambiguous word deliberately; for it is impossible to distinguish in these tales of the prison-house how far their vice and gloom are thrown into their manufacture only to meet a vile demand, and how far they are an integral condition of thought in the minds of men trained from their youth up in the knowledge of Londonian and Parisian misery. The speciality of the plague is a delight in the

exposition of the relations between guilt and decrepitude ; and I call the results of it literature 'of the prison-house,' because the thwarted habits of body and mind, which are the punishment of reckless crowding in cities, become, in the issue of that punishment, frightful subjects of exclusive interest to themselves ; and the art of fiction in which they finally delight is only the more studied arrangement and illustration, by coloured firelights, of the daily bulletins of their own wretchedness, in the prison calendar, the police news, and the hospital report.

The reader will perhaps be surprised at my separating the greatest work of Dickens, *Oliver Twist*, with honour, from the loathsome mass to which it typically belongs. That book is an earnest and uncaricatured record of states of criminal life, written with didactic purpose, full of the gravest instruction, nor destitute of pathetic studies of noble passion. Even the *Mysteries of Paris* and Gaboriau's *Crime d'Augival* are raised, by their definiteness of historical intention and forewarning anxiety, far above the level of their order, and may be accepted as photographic evidence of an otherwise incredible civilisation, corrupted in the infernal fact of it, down to the genesis of such figures as the Vicomte d'Augival, the Stabber,¹ the Skeleton, and the She-wolf. But the effectual head of the whole cretinous school is the renowned novel in which the hunchbacked lover watches the execution of his

¹Chourineur 'not striking with dagger-point, but ripping with knife-edge. Yet I do him, and La Louve, injustice in classing them with the two others ; they are put together only as parts in the same phantasm. Compare with La Louve, the strength of wild virtue in the 'Louvécienne' (Lucienne) of Gaboriau—she, province-born and bred ; and opposed to Parisian civilisation in the character of her sempstress friend. 'De ce Paris, où elle était née, elle savait tout—elle connaissait tout. Rien ne l'étonnait, nul ne l'intimidait. Sa science des détails matériels de l'existence était inconcevable. Impossible de la duper !—Eh bien ! cette fille si laborieuse et si économe n'avait même pas la plus vague notion des sentiments qui sont l'honneur de la femme. Je n'avais pas idée d'une si complète absence de sens moral ; d'une si inconsciente dépravation, d'une impudence si effrontément naïve.'—*L'Argent des autres*, vol. i. p. 358.

mistress from the tower of Notre-Dame; and its strength passes gradually away into the anatomical preparations, for the general market, of novels like *Poor Miss Finch*, in which the heroine is blind, the hero epileptic, and the obnoxious brother is found dead with his hands dropped off, in the Arctic regions.¹

¹ The reader who cares to seek it may easily find medical evidence of the physical effects of certain states of brain disease in producing especially images of truncated and Hermes-like deformity, complicated with grossness. Horace, in the *Epodes*, scoffs at it, but not without horror. Luca Signorelli and Raphael in their arabesques are deeply struck by it: Durer, defying and playing with it alternately, is almost beaten down again and again in the distorted faces, hewing halberts, and suspended satyrs of his arabesques round the polyglot Lord's Prayer; it takes entire possession of Balzac in the *Contes Drolatiques*; it struck Scott in the earliest days of his childish 'visions' intensified by the axe-stroke murder of his grand aunt; L. i. 142, and see close of this note. It chose for him the subject of the *Heart of Midlothian*, and produced afterwards all the recurrent ideas of executions, tainting *Nigel* almost spoiling *Quentin Durward*—utterly the *Fair Maid of Perth*: and culminating in *Bizarro*, L. x. 149. It suggested all the deaths by falling, or sinking, as in delirious sleep—Kennedy, Eveline Neville (nearly repeated in Clara Mowbray), Amy Robsart, the Master of Ravenswood in the quicksand, Morris, and Corporal Grace-be-here—compare the dream of Gride, in *Nicholas Nickleby*, and Dickens's own last words, *on the ground*, (so also, in my own inflammation of the brain, two years ago, I dreamed that I fell through the earth and came out on the other side). In its grotesque and distorting power, it produced all the figures of the Lay Goblin, Pacolet, Flibbertigibbet, Cockledemoy, Geoffrey Hudson, Fenella, and Nectabanus; in Dickens it in like manner gives Quilp, Krook, Smike, Smallweed, Miss Mowcher, and the dwarfs and wax-work of Nell's caravan; and runs entirely wild in *Barnaby Rudge*, where, with a *corps de drame* composed of one idiot, two madmen, a gentleman fool who is also a villain, a shop-boy fool who is also a black-guard, a hangman, a shrivelled virago, and a doll in ribands—carrying this company through riot and fire, till he hangs the hangman, one of the madmen, his mother, and the idiot, runs the gentleman-fool through in a bloody duel, and burns and crushes the shop-boy fool into shapelessness, he cannot yet be content without shooting the spare lover's leg off, and marrying him to the doll in a wooden one; the shapeless shop-boy being finally also married in *two* wooden ones. It is this mutilation, observe, which is the very sign manual of the plague; joined, in the artistic forms of it, with a love of thorniness—(in their mystic root, the

This literature of the Prison-house, understanding by the word not only the cell of Newgate, but also and even more definitely the cell of the Hôtel-Dieu, the Hôpital des Fous, and the grated corridor with the dripping slabs of the Morgue,

truncation of the limbless serpent and the spines of the dragon's wing. Compare *Modern Painters*, vol. iv., 'Chapter on the Mountain Gloom,' s. 19; and in *all* forms of it, with petrification or loss of power by cold in the blood, whence the last Darwinian process of the witches' charm—'cool it with a baboon's blood, then the charm is firm and good.' The two frescoes in the colossal handbills which have lately decorated the streets of London (the baboon with the mirror, and the Maskelyne and Cooke decapitation) are the final English forms of Raphael's arabesque under this influence; and it is well worth while to get the number for the week ending April 3, 1880, of *Young Folks*—'A magazine of instructive and entertaining literature for boys and girls of all ages,' containing 'A Sequel to Desdichado' (the modern development of Ivanhoe), in which a quite monumental example of the kind of art in question will be found as a leading illustration of this characteristic sentence, "See, good Cerberus," said Sir Rupert, "*my hand has been struck off. You must make me a hand of iron, one with springs in it, so that I can make it grasp a dagger.*" The text is also, as it professes to be, instructive; being the ultimate degeneration of what I have above called the 'folly' of *Ivanhoe*; for folly begets folly down, and down; and whatever Scott and Turner did wrong has thousands of imitators—their wisdom none will so much as hear, how much less follow!

In both of the Masters, it is always to be remembered that the evil and good are alike conditions of literal *vision*: and therefore also, inseparably connected with the state of the health. I believe the first elements of all Scott's errors were in the milk of his consumptive nurse, which all but killed him as an infant, L. i. 19—and was without doubt the cause of the teething fever that ended in his lameness (L. i. 20). Then came (if the reader cares to know what I mean by Fors, let him read the page carefully) the fearful accidents to his only sister, and her death, L. i. 17; then the madness of his nurse, who planned his own murder (21), then the stories continually told him of the executions at Carlisle (24), his aunt's husband having seen them; issuing, he himself scarcely knows how, in the unaccountable terror that came upon him at the sight of statuary, 31—especially Jacob's ladder; then the murder of Mrs. Swinton and finally the nearly fatal bursting of the bloodvessel at Kelso, with the succeeding nervous illness, 65–67—solaced, while he was being 'bled and blistered till he had scarcely a pulse left,' by that history of the Knights of Malta—fondly dwelt on and realised by actual modelling of their fortress, which returned to his mind for the theme of its last effort in passing away.

having its central root thus in the Ile de Paris—or historically and pre-eminently the ‘Cité de Paris’—is, when understood deeply, the precise counter-corruption of the religion of the Sainte Chapelle, just as the worst forms of bodily and mental ruin are the corruption of love. I have therefore called it ‘Fiction mécréante,’ with literal accuracy and precision ; according to the explanation of the word which the reader may find in any good French dictionary,¹ and round its Arctic pole in the Morgue, he may gather into one Caina of gelid putrescence the entire product of modern infidel imagination, amusing itself with destruction of the body, and busying itself with aberration of the mind.

Aberration, palsy, or plague, observe, as distinguished from normal evil, just as the venom of rabies or cholera differs from that of a wasp or a viper. The life of the insect and serpent deserves, or at least permits, our thoughts ; not so the stages of agony in the fury-driven hound. There is some excuse, indeed, for the pathologic labour of the modern novelist in the fact that he cannot easily, in a city population, find a healthy mind to vivisection : but the greater part of such amateur surgery is the struggle, in an epoch of wild literary competition, to obtain novelty of material. The varieties of aspect and colour in healthy fruit, be it sweet or sour, may be within certain limits described exhaustively. Not so the blotches of its conceivable blight : and while the symmetries of integral human character can only be traced by harmonious and tender skill, like the branches of a living tree, the faults and gaps of one gnawed away by corroding accident can be shuffled into senseless change like the wards of a Chubb lock.

V. It is needless to insist on the vast field for this dice-cast or card-dealt calamity which opens itself in the ignorance, money-interest, and mean passion, of city marriage. Peasants know each other as children—meet, as they grow up in testing labour ; and if a stout farmer’s son marries a handless girl, it is his own fault. Also in the patrician families of the field, the young people know what they are doing, and marry

¹ ‘Se dit par dénigrement, d’un chrétien qui ne croit pas les dogmes de sa religion.’—Fleming, vol. ii. p. 659.

a neighbouring estate, or a covetable title, with some conception of the responsibilities they undertake. But even among these, their season in the confused metropolis creates licentious and fortuitous temptation before unknown ; and in the lower middle orders, an entirely new kingdom of discomfort and disgrace has been preached to them in the doctrines of unbridled pleasure which are merely an apology for their peculiar forms of illbreeding. It is quite curious how often the catastrophe, or the leading interest, of a modern novel, turns upon the want, both in maid and bachelor, of the common self-command which was taught to their grandmothers and grandfathers as the first element of ordinarily decent behaviour. Rashly inquiring the other day the plot of a modern story from a female friend, I elicited, after some hesitation, that it hinged mainly on the young people's ' forgetting themselves in a boat ; ' and I perceive it to be accepted as nearly an axiom in the code of modern civic chivalry that the strength of amiable sentiment is proved by our incapacity on proper occasions to express, and on improper ones to control it. The pride of a gentleman of the old school used to be in his power of saying what he meant, and being silent when he ought, (not to speak of the higher nobleness which bestowed love where it was honourable, and reverence where it was due) ; but the automatic amours and involuntary proposals of recent romance acknowledge little further law of morality than the instinct of an insect, or the effervescence of a chemical mixture.

There is a pretty little story of Alfred de Musset's,—*La Mouche*, which, if the reader cares to glance at it, will save me further trouble in explaining the disciplinarian authority of mere old-fashioned politeness, as in some sort protective of higher things. It describes, with much grace and precision, a state of society by no means pre-eminently virtuous, or enthusiastically heroic ; in which many people do extremely wrong, and none sublimely right. But as there are heights of which the achievement is unattempted, there are abysses to which fall is barred ; neither accident nor temptation will make any of the principal personages swerve from an adopted

resolution, or violate an accepted principle of honour ; people are expected as a matter of course to speak with propriety on occasion, and to wait with patience when they are bid : those who do wrong, admit it ; those who do right don't boast of it ; everybody knows his own mind, and everybody has good manners.

Nor must it be forgotten that in the worst days of the self-indulgence which destroyed the aristocracies of Europe, their vices, however licentious, were never, in the fatal modern sense, 'unprincipled.' The vainest believed in virtue ; the vilest respected it. 'Chaque chose avait son nom,'¹ and the severest of English moralists recognises the accurate wit, the lofty intellect, and the unfretted benevolence, which redeemed from vitiated surroundings the circle of d'Alembert and Marmontel.²

I have said, with too slight praise, that the vainest, in those days, 'believed' in virtue. Beautiful and heroic examples of it were always before them ; nor was it without the secret significance attaching to what may seem the least accidents in the work of a master, that Scott gave to both his heroines of the age of revolution in England the name of the queen of the highest order of English chivalry.³

It is to say little for the types of youth and maid which alone Scott felt it a joy to imagine, or thought it honourable to portray, that they act and feel in a sphere where they are never for an instant liable to any of the weaknesses which disturb the calm, or shake the resolution, of chastity and courage in a modern novel. Scott lived in a country and time,

¹ 'A son nom,' properly. The sentence is one of Victor Cherbuliez's, in *Prosper Randoe*, which is full of other valuable ones. See the old nurse's 'ici bas les choses vont de travers, comme un chien qui va à vèpres,' p. 93 ; and compare Prosper's treasures, 'la petite Vénus, et le petit Christ d'ivoire,' p. 121 ; also Madame Brehanne's request for the divertissement of 'quelque belle batterie à coups de couteau' with Didier's answer. 'Hélas ! madame, vous jouez de malheur, ici dans la Drôme, l'on se massacre aussi peu que possible,' p. 33.

² Edgeworth's *Tales* (Hunter, 1827), 'Harrington and Ormond,' vol. iii. p. 260.

³ Alice of Salisbury, Alice Lee, Alice Bridgnorth.

when, from highest to lowest, but chiefly in that dignified and nobly severe¹ middle class to which he himself belonged, a habit of serene and stainless thought was as natural to the people as their mountain air. Women like Rose Bradwardine and Ailie Dinmont were the grace and guard of almost every household (God be praised that the race of them is not yet extinct, for all that Mall or Boulevard can do), and it has perhaps escaped the notice of even attentive readers that the comparatively uninteresting character of Sir Walter's heroes had always been studied among a class of youths who were simply incapable of doing anything seriously wrong; and could only be embarrassed by the consequences of their levity or imprudence.

But there is another difference in the woof of a Waverley novel from the cobweb of a modern one, which depends on Scott's larger view of human life. Marriage is by no means, in his conception of man and woman, the most important business of their existence;² nor love the only reward to be proposed to their virtue or exertion. It is not in his reading of the laws of Providence a necessity that virtue should, either by love or any other external blessing, be rewarded at all;³ and marriage is in all cases thought of as a constituent of the happiness of life, but not as its only interest, still less its only aim. And upon analysing with some care the motives of his principal stories, we shall often find that the love in them is merely a light by which the sterner features of character are to be irradiated, and that the marriage of the hero is as subordinate to the main bent of the story as Henry the Fifth's

¹ Scott's father was habitually ascetic. 'I have heard his son tell that it was common with him, if any one observed that the soup was good, to taste it again, and say, "Yes—it is too good, bairns," and dash a tumbler of cold water into his plate.'—Lockhart's *Life* (Black, Edinburgh, 1869), vol. i. p. 312. In other places I refer to this book in the simple form of 'L.'

² A young lady sang to me, just before I copied out this page for press, a Miss Somebody's 'great song,' 'Live, and Love, and Die.' Had it been written for nothing better than silkworms, it should at least have added—Spin.

³ See passage of introduction to *Icanhoe*, wisely quoted in L. vi 106.

courtship of Katherine is to the battle of Agincourt. Nay, the fortunes of the person who is nominally the subject of the tale are often little more than a background on which grander figures are to be drawn, and deeper fates forth-shadowed. The judgments between the faith and chivalry of Scotland at Drumclog and Bothwell bridge owe little of their interest in the mind of a sensible reader to the fact that the captain of the Popinjay is carried a prisoner to one battle, and returns a prisoner from the other : and Scott himself, while he watches the white sail that bears Queen Mary for the last time from her native land, very nearly forgets to finish his novel, or to tell us—and with small sense of any consolation to be had out of that minor circumstance,—that ‘Roland and Catherine were united, spite of their differing faiths.’

Neither let it be thought for an instant that the slight, and sometimes scornful, glance with which Scott passes over scenes which a novelist of our own day would have analysed with the airs of a philosopher, and painted with the curiosity of a gossip, indicate any absence in his heart of sympathy with the great and sacred elements of personal happiness. An era like ours, which has with diligence and ostentation swept its heart clear of all the passions once known as loyalty, patriotism, and piety, necessarily magnifies the apparent force of the one remaining sentiment which sighs through the barren chambers, or clings inextricably round the chasms of ruin ; nor can it but regard with awe the unconquerable spirit which still tempts or betrays the sagacities of selfishness into error or frenzy which is believed to be love.

That Scott was never himself, in the sense of the phrase as employed by lovers of the Parisian school, ‘ivre d’amour,’ may be admitted without prejudice to his sensibility,¹ and that he never knew ‘l’amor che move ’l sol e l’altre stelle,’ was the chief, though unrecognised, calamity of his deeply chequered life. But the reader of honour and feeling will not therefore suppose that the love which Miss Vernon sacrifices, stooping for an instant from her horse, is of less noble stamp, or less

¹ See below, note, p. 25, on the conclusion of *Woodstock*.

enduring faith, than that which troubles and degrades the whole existence of Consuelo ; or that the affection of Jeanie Deans for the companion of her childhood, drawn like a field of soft blue heaven beyond the cloudy wrack of her sorrow, is less fully in possession of her soul than the hesitating and self-reproachful impulses under which a modern heroine forgets herself in a boat, or compromises herself in the cool of the evening.

I do not wish to return over the waste ground we have traversed, comparing, point by point, Scott's manner with those of Bermondsey and the Faubourgs ; but it may be, perhaps, interesting at this moment to examine, with illustration from those *Waverley* novels which have so lately retracted the attention of a fair and gentle public, the universal conditions of 'style,' rightly so called, which are in all ages, and above all local currents or wavering tides of temporary manners, pillars of what is for ever strong, and models of what is for ever fair.

But I must first define, and that within strict horizon, the works of Scott, in which his perfect mind may be known, and his chosen ways understood.

His great works of prose fiction, excepting only the first half-volume of *Waverley*, were all written in twelve years, 1814–26 (of his own age forty-three to fifty-five), the actual time employed in their composition being not more than a couple of months out of each year ; and during that time only the morning hours and spare minutes during the professional day. 'Though the first volume of *Waverley* was begun long ago, and actually lost for a time, yet the other two were begun and finished between the 4th of June and the first of July, during all which I attended my duty in court, and proceeded without loss of time or hindrance of business.'

Few of the maxims for the enforcement of which, in *Modern Painters*, long ago, I got the general character of a lover of paradox, are more singular, or more sure, than the statement, apparently so encouraging to the idle, that if a great

thing can be done at all, it can be done easily. But it is in that kind of ease with which a tree blossoms after long years of gathered strength, and all Scott's great writings were the recreations of a mind confirmed in dutiful labour, and rich with organic gathering of boundless resource.

Omitting from our count the two minor and ill-finished sketches of the *Black Dwarf* and *Legend of Montrose*, and, for a reason presently to be noticed, the unhappy *St. Ronan's*, the memorable romances of Scott are eighteen, falling into three distinct groups, containing six each.

The first group is distinguished from the other two by characters of strength and felicity which never more appeared after Scott was struck down by his terrific illness in 1819. It includes *Waverley*, *Guy Mannering*, *The Antiquary*, *Rob Roy*, *Old Mortality*, and *The Heart of Midlothian*.

The composition of these occupied the mornings of his happiest days, between the ages of 43 and 48. On the 8th of April, 1819 (he was 48 on the preceding 15th of August) he began for the first time to dictate—being unable for the exertion of writing—*The Bride of Lammermuir*, 'the affectionate Laidlaw beseeching him to stop dictating, when his audible suffering filled every pause. "Nay, Willie," he answered "only see that the doors are fast. I would fain keep all the cry as well as all the wool to ourselves; but as for giving over work, that can only be when I am in woollen."' From this time forward the brightness of joy and sincerity of inevitable humour, which perfected the imagery of the earlier novels, are wholly absent, except in the two short intervals of health unaccountably restored, in which he wrote *Redgauntlet* and *Nigel*.

It is strange, but only a part of the general simplicity of Scott's genius, that these revivals of earlier power were unconscious, and that the time of extreme weakness in which he wrote *St. Ronan's Well*, was that in which he first asserted his own restoration.

It is also a deeply interesting characteristic of his noble nature that he never gains anything by sickness; the whole

¹ L. vi. 67.

man breathes or faints as one creature ; the ache that stiffens a limb chills his heart, and every pang of the stomach paralyses the brain. It is not so with inferior minds, in the workings of which it is often impossible to distinguish native from narcotic fancy, and throbs of conscience from those of indigestion. Whether in exaltation or languor, the colours of mind are always morbid, which gleam on the sea for the 'Ancient Mariner,' and through the casements on 'St. Agnes' Eve ;' but Scott is at once blinded and stultified by sickness ; never has a fit of the cramp without spoiling a chapter, and is perhaps the only author of vivid imagination who never wrote a foolish word but when he was ill.

It remains only to be noticed on this point that any strong natural excitement, affecting the deeper springs of his heart, would at once restore his intellectual powers in all their fullness, and that, far towards their sunset : but that the strong will on which he prided himself, though it could trample upon pain, silence grief, and compel industry, never could warm his imagination, or clear the judgment in his darker hours.

I believe that this power of the heart over the intellect is common to all great men : but what the special character of emotion was, that alone could lift Scott above the power of death, I am about to ask the reader, in a little while, to observe with joyful care.

The first series of romances then, above named, are all that exhibit the emphasis of his unharmed faculties. The second group, composed in the three years subsequent to illness all but mortal, bear every one of them more or less the seal of it.

They consist of the *Bride of Lammermuir*, *Ivanhoe*, the *Monastery*, the *Abbot*, *Kenilworth*, and the *Pirate*.¹ The marks of broken health on all these are essentially twofold—prevailing melancholy, and fantastic improbability. Three of the tales are agonizingly tragic, the *Abbot* scarcely less so in its main event, and *Ivanhoe* deeply wounded through all its

¹ 'One other such novel, and there's an end ; but who can last for ever ? who ever lasted so long ?'—Sydney Smith (of the *Pirate*) to Jeffrey, December 30, 1821. (*Letters*, vol. ii. p. 223.)

bright panoply ; while even in that most powerful of the series, the impossible archeries and axestrokes, the incredibly opportune appearances of Locksley, the death of Ulrica, and the resuscitation of Athelstane, are partly boyish, partly feverish. Caleb in the *Bride*, Triptolemus and Halero in the *Pirate*, are all laborious, and the first incongruous ; half a volume of the *Abbot* is spent in extremely dull detail of Roland's relations with his fellow-servants and his mistress, which have nothing whatever to do with the future story ; and the lady of Avenel herself disappears after the first volume, 'like a snaw wreath when it's thaw, Jeanie.' The public has for itself pronounced on the *Monastery*, though as much too harshly as it has foolishly praised the horrors of *Ravenswood* and the nonsense of *Ivanhoe* ; because the modern public finds in the torture and adventure of these, the kind of excitement which it seeks at an opera, while it has no sympathy whatever with the pastoral happiness of Glendearg, or with the lingering simplicities of superstition which give historical likelihood to the legend of the White Lady.

But both this despised tale and its sequel have Scott's heart in them. The first was begun to refresh himself in the intervals of artificial labour on *Ivanhoe*. 'It was a relief,' he said, 'to interlay the scenery most familiar to me' with the strange world for which I had to draw so much on imagination.'² Through all the closing scenes of the second he is

¹ L. vi. p. 188. Compare the description of Fairy Dean, vii. 192.

² All, alas ! were now in a great measure so written. *Ivanhoe*, *The Monastery*, *The Abbot* and *Kenilworth* were all published between December 1819 and January 1821, Constable & Co. giving five thousand guineas for the remaining copyright of them, Scott clearing ten thousand before the bargain was completed ; and before the *Fortunes of Nigel* issued from the press Scott had exchanged instruments and received his bookseller's bills for no less than four 'works of fiction,' not one of them otherwise described in the deeds of agreement, to be produced in unbroken succession, *each of them to fill up at least three volumes, but with proper saving clauses as to increase of copy money in case any of them should run to four* ; and within two years all this anticipation had been wiped off by *Peveril of the Peak*, *Quentin Durward*, *St. Ronan's Well*, and *Redgauntlet*.

raised to his own true level by his love for the queen. And within the code of Scott's work to which I am about to appeal for illustration of his essential powers, I accept the *Monastery* and *Abbot*, and reject from it the remaining four of this group.

The last series contains two quite noble ones, *Redgauntlet* and *Nigel* ; two of very high value, *Durward* and *Woodstock* ; the slovenly and diffuse *Peveril*, written for the trade ; the sickly *Tales of the Crusaders*, and the entirely broken and diseased *St. Ronan's Well*. This last I throw out of count altogether, and of the rest, accept only the four first named as sound work ; so that the list of the novels in which I propose to examine his methods and ideal standards, reduces itself to these following twelve (named in order of production) : *Waverley*, *Guy Mannering*, the *Antiquary*, *Rob Roy*, *Old Mortality*, the *Heart of Midlothian*, the *Monastery*, the *Abbot*, the *Fortunes of Nigel*, *Quentin Durward*, and *Woodstock*.¹

It is, however, too late to enter on my subject in this article, which I may fitly close by pointing out some of the merely verbal characteristics of his style, illustrative in little ways of the questions we have been examining, and chiefly of the one which may be most embarrassing to many readers, the difference, namely, between character and disease.

One quite distinctive charm in the Waverleys is their modified use of the Scottish dialect ;² but it has not generally been observed, either by their imitators, or the authors of different taste who have written for a later public, that there is a difference between the dialect of a language, and its corruption.

A dialect is formed in any district where there are persons of intelligence enough to use the language itself in all its fineness and force, but under the particular conditions of life, climate, and temper, which introduce words peculiar to the scenery, forms of word and idioms of sentence peculiar to the race, and pronunciations indicative of their character and disposition.

¹ *Woodstock* was finished 26th March 1826. He knew then of his ruin ; and wrote in bitterness, but not in weakness. The closing pages are the most beautiful of the book. But a month afterwards Lady Scott died ; and he never wrote glad word more.

Thus 'burn' (of a streamlet) is a word possible only in a country where there are brightly running waters, 'lassie,' a word possible only where girls are as free as the rivulets, and 'auld,' a form of the southern 'old,' adopted by a race of finer musical ear than the English.

On the contrary, mere deteriorations, or coarse, strident, and, in the ordinary sense of the phrase, 'broad' forms of utterance, are not dialects at all, having nothing dialectic in them, and all phrases developed in states of rude employment, and restricted intercourse, are injurious to the tone and narrowing to the power of the language they affect. Mere breadth of accent does not spoil a dialect as long as the speakers are men of varied idea and good intelligence; but the moment the life is contracted by mining, millwork, or any oppressive and monotonous labour, the accents and phrases become debased. It is part of the popular folly of the day to find pleasure in trying to write and spell these abortive, crippled, and more or less brutal forms of human speech.

Abortive, crippled, or brutal, are however not necessarily 'corrupted' dialects. Corrupt language is that gathered by ignorance, invented by vice, misused by insensibility, or minced and mouthed by affectation, especially in the attempt to deal with words of which only half the meaning is understood, or half the sound heard. Mrs. Gamp's 'aperiently so'—and the 'undermined' with primal sense of undermine, of—I forget which gossip, in the *Mill on the Floss*, are master- and mistress pieces in this latter kind. Mrs. Malaprop's 'allegories on the banks of the Nile' are in a somewhat higher order of mistake: Miss Tabitha Bramble's ignorance is vulgarised by her selfishness, and Winifred Jenkins' by her conceit. The 'wot' of Noah Claypole, and the other degradations of cockneyism (Sam Weller and his father are in nothing more admirable than in the power of heart and sense that can purify even these); the 'trewth' of Mr. Chadband, and 'natur' of Mr. Squeers, are examples of the corruption of words by insensibility: the use of the word 'bloody' in modern low English is a deeper corruption, not altering the form of the word, but defiling the thought in it.

Thus much being understood, I shall proceed to examine thoroughly a fragment of Scott's Lowland Scottish dialect; not choosing it of the most beautiful kind; on the contrary, it shall be a piece reaching as low down as he ever allows Scotch to go—it is perhaps the only unfair patriotism in him, that if ever he wants a word or two of really villanous slang, he gives it in English or Dutch—not Scotch.

I had intended in the close of this paper to analyse and compare the characters of Andrew Fairservice and Richie Moniplies for examples, the former of innate evil, unaffected by external influences, and undiseased, but distinct from natural goodness as a nettle is distinct from balm or lavender; and the latter of innate goodness, contracted and pinched by circumstance, but still undiseased, as an oak-leaf crisped by frost, not by the worm. This, with much else in my mind, I must put off; but the careful study of one sentence of Andrew's will give us a good deal to think of.

I take his account of the rescue of Glasgow Cathedral at the time of the Reformation.

Ah! it's a brave kirk—nane o' yere whigmalceries and curlewurlies and opensteek hems about it—a' solid, weel-jointed mason-wark, that will stand as lang as the warld, keep hands and gunpowther aff it. It had amaist a douncome lang syne at the Reformation, when they pu'd down the kirks of St. Andrews and Perth, and thereawa', to cleanse them o' Papery, and idolatry, and image-worship, and surplices, and sic-like rags o' the muckle lure that sitteth on seven hills, as if ane wasna braid eneugh for her auld hinder end. Sae the commons o' Renfrew, and o' the Burony, and the Gorbals, and a' about, they behoved to come into Glasgow ae fair morning, to try their hand on purging the High Kirk o' Popish nick-nackets. But the townsmen o' Glasgow, they were feared their auld edifice might slip the girths in gaun through sicca rough physic, sae they rang the common bell, and assembled the train-bands wi' took o' drum. By good luck, the worthy James Rabat was Dean o' Guild that year—(and a gude mason he was himsell, made him the keener to keep up the auld bigging), and the trades assembled, and offered downright battle to the commons, rather than their kirk should coup the crans, as others had done elsewhere. It wasna for luv o'

Paperie—na, na!—nane could ever say that o' the trades o' Glasgow—Sae they sune came to an agreement to take a' the idolatrous statues of sants (sorrow be on them !) out o' their neuks—And sae the bits o' stane idols were broken in pieces by Scripture warrant, and flung into the Molendinar burn, and the auld kirk stood as crouse as a cat when the flaes are kaimed aff her, and a'boday was alike pleased. And I hae heard wise folk say, that if the same had been done in ilka kirk in Scotland, the Reform wad just hae been as pure as it is e'en now, and we wad hae mair Christian-like kirks ; for I hae been sae lang in England, that naething will drived out o' my head, that the dog-kennel at Osbaldistone-Hall is better than mony a house o' God in Scotland.

Now this sentence is in the first place a piece of Scottish history of quite inestimable and concentrated value. Andrew's temperament is the type of a vast class of Scottish—shall we call it '*sow-thistlian*'—mind, which necessarily takes the view of either Pope or saint that the thistle in Lebanon took of the cedar or lilies in Lebanon ; and the entire force of the passions which, in the Scottish revolution, foretold and forearmed the French one, is told in this one paragraph ; the coarseness of it, observe, being admitted, not for the sake of the laugh, any more than an onion in broth merely for its flavour, but for the meat of it ; the inherent constancy of that coarseness being a fact in this order of mind, and an essential part of the history to be told.

Secondly, observe that this speech, in the religious passion of it, such as there may be, is entirely sincere. Andrew is a thief, a liar, a coward, and, in the Fair service from which he takes his name, a hypocrite ; but in the form of prejudice, which is all that his mind is capable of in the place of religion, he is entirely sincere. He does not in the least pretend detestation of image worship to please his master, or any one else ; he honestly scorns the '*carnal morality*'¹ as dowl and fusionless as rue-leaves at Yule' of the sermon in the upper cathedral ; and when wrapt in critical attention to the '*real savour o' doctrine*' in the crypt, so completely forgets the hypocrisy of

¹ Compare Mr. Spurgeon's not unfrequent orations on the same subject.

his fair service as to return his master's attempt to disturb him with hard punches of the elbow.

Thirdly. He is a man of no mean sagacity, quite up to the average standard of Scottish common sense, not a low one ; and, though incapable of understanding any manner of lofty thought or passion, is a shrewd measurer of weaknesses, and not without a spark or two of kindly feeling. See first his sketch of his master's character to Mr. Hammorgaw, beginning : 'He's no a'thegither sae void o' sense, neither ;' and then the close of the dialogue : 'But the lad's no a bad lad after a', and he needs some carefu' body to look after him.'

Fourthly. He is a good workman ; knows his own business well, and can judge of other craft, if sound, or otherwise.

All these four qualities of him must be known before we can understand this single speech. Keeping them in mind, I take it up, word by word.

You observe, in the outset, Scott makes no attempt whatever to indicate accents or modes of pronunciation by changed spelling, unless the word becomes a quite definitely new and scarcely writeable one. The Scottish way of pronouncing 'James,' for instance, is entirely peculiar, and extremely pleasant to the ear. But it is so, just because it does *not* change the word into Jeems, nor into Jims, nor into Jawms. A modern writer of dialects would think it amusing to use one or other of these ugly spellings. But Scott writes the name in pure English, knowing that a Scots reader will speak it rightly, and an English one be wise in letting it alone. On the other hand he writes 'weel' for 'well,' because that word is complete in its change, and may be very closely expressed by the double *e*. The ambiguous '*u*'s in 'gude' and 'sune' are admitted, because far liker the sound than the double *o* would be, and that in 'hure,' for 'grace' sake, to soften the word ;—so also 'flaes' for 'fleas.' 'Mony' for 'many' is again positively right in sound, and 'neuk' differs from our 'nook' in sense, and is not the same word at all, as we shall presently see.

Secondly, observe, not a word is corrupted in any indecent haste, slowness, slovenliness, or incapacity of pronunciation. There is no lisping, drawling, slobbering, or snuffling : the

speech is as clear as a bell and as keen as an arrow: and its elisions and contractions are either melodious, ('na,' for 'not,' —'pu'd,' for 'pulled,') or as normal as in a Latin verse. The long words are delivered without the slightest bungling; and 'bigging' finished to its last *g*.

I take the important words now in their places.

Brave. The old English sense of the word in 'to go brave' retained, expressing Andrew's sincere and respectful admiration. Had he meant to insinuate a hint of the church's being too fine, he would have said 'braw.'

Kirk. This is of course just as pure and unprovincial a word as 'Kirche,' or 'église.'

Whigmaleerie. I cannot get at the root of this word, but it is one showing that the speaker is not bound by classic rules, but will use any syllables that enrich his meaning. 'Nip-perty-tipperty' (of his master's 'poetry-nonsense') is another word of the same class. 'Curleurlie' is of course just as pure as Shakespeare's 'Hurly-burly.' But see first suggestion of the idea to Scott at Blair-Adam (L. vi. 264).

Opensteek hems. More description, or better, of the later Gothic cannot be put into four syllables. 'Steek,' melodious for stitch, has a combined sense of closing or fastening. And note that the later Gothic, being precisely what Scott knew best (in Melrose) and liked best, it is, here as elsewhere, quite as much himself¹ as Frank, that he is laughing at, when he laughs *with* Andrew, whose 'opensteek hems' are only a ruder metaphor for his own 'willow-wreaths changed to stone.'

Gunpowther. '-Ther' is a lingering vestige of the French '-dre.'

Syne. One of the melodious and mysterious Scottish words which have partly the sound of wind and stream in them, and partly the range of softened idea which is like a distance of blue hills over border land ('far in the distant Cheviot's blue'). Perhaps even the least sympathetic 'Englisher' might recognise this, if he heard 'Old Long Since' vocally substituted

¹ There are three definite and intentional portraits of himself, in the novels, each giving a separate part of himself: Mr. Oldbuck, Frank Osbaldistone, and Alan Fairford.

for the Scottish words to the air. I do not know the root; but the word's proper meaning is not 'since,' but before or after an interval of some duration, 'as weel sune as syne.' 'But first on Sawnie gies a ca', Syne, bauldly in she enters.'

Behoved (to come). A rich word, with peculiar idiom, always used more or less ironically of anything done under a partly mistaken and partly pretended notion of duty.

Siccan. Far prettier, and fuller in meaning than 'such.' It contains an added sense of wonder; and means properly 'so great' or 'so unusual.'

Took (o' drum). Classical 'tuck' from Italian 'toccata,' the preluding 'touch' or flourish, on any instrument (but see Johnson under word 'tucket,' quoting *Othello*). The deeper Scottish vowels are used here to mark the deeper sound of the bass drum, as in more solemn warning.

Bigging. The only word in all the sentence of which the Scottish form is less melodious than the English, 'and what for no,' seeing that Scottish architecture is mostly little beyond Bessie Bell's and Mary Gray's? 'They biggit a bow're by yon burnside, and theekit it ow're wi rashes.' But it is pure Anglo-Saxon in roots; see glossary to Fairbairn's edition of the Douglas *Virgil*, 1710.

Coup. Another of the much-embracing words; short for 'upset,' but with a sense of awkwardness as the inherent cause of fall; compare Richie Moniplies (also for sense of 'behoved'): 'Ae auld hirplin deevil of a potter behoved just to step in my way, and offer me a pig (earthern pot—etym. dub.), as he said "just to put my Scotch ointment in;" and I gave him a push, as but natural, and the tottering deevil coupit owre amang his own pigs, and damaged a score of them.' So also Dandie Dinmont in the postchaise: 'Od! I hope they'll no coup us.'

The Crans. Idiomatic; root unknown to me, but it means in this use, full, total, and without recovery.

Molendinar. From 'molendinum,' the grinding-place. I do not know if actually the local name,¹ or Scott's invention.

¹ Andrew knows Latin, and might have coined the word in his conceit; but, writing to a kind friend in Glasgow, I find the brook was

Compare Sir Piercie's 'Molinaras.' But at all events used here with bye-sense of degradation of the formerly idle saints to grind at the mill.

Crouse. Courageous, softened with a sense of comfort.

Ilka. Again a word with azure distance, including the whole sense of 'each' and 'every.' The reader must carefully and reverently distinguish these comprehensive words, which gather two or more perfectly understood meanings into one *chord* of meaning, and are harmonies more than words, from the above-noted blunders between two half-hit meanings, struck as a bad piano-player strikes the edge of another note. In English we have fewer of these combined thoughts; so that Shakespeare rather plays with the distinct lights of his words, than melts them into one. So again Bishop Douglas spells, and doubtless spoke, the word 'rose,' differently, according to his purpose; if as the chief or governing ruler of flowers, 'rois,' but if only in her own beauty, rose.

Christian-like. The sense of the decency and order proper to Christianity is stronger in Scotland than in any other country, and the word 'Christian' more distinctly opposed to 'beast.' Hence the back-handed cut at the English for their over-pious care of dogs.

I am a little surprised myself at the length to which this examination of one small piece of Sir Walter's first-rate work has carried us, but here I must end for this time, trusting, if the Editor of the *Nineteenth Century* permit me, yet to trespass, perhaps more than once, on his readers' patience; but, at all events, to examine in a following paper the technical characteristics of Scott's own style, both in prose and verse,

called 'Molyndona' even before the building of the Sub-dean Mill in 1446. See also account of the locality in Mr. George's admirable volume, *Old Glasgow*, pp. 129, 149, &c. The Protestantism of Glasgow, since throwing that powder of saints into her brook Kidron, has presented it with other pious offerings; and my friend goes on to say that the brook, once famed for the purity of its waters (much used for bleaching), 'has for nearly a hundred years been a crawling stream of loathsomeness. It is now bricked over, and a carriage-way made on the top of it; underneath the foul mess still passes through the heart of the city, till it falls into the Clyde close to the harbour.'

together with Byron's, as opposed to our fashionably recent dialects and rhythms ; the essential virtues of language, in both the masters of the old school, hinging ultimately, little as it might be thought, on certain unalterable views of theirs concerning the code called 'of the Ten Commandments,' wholly at variance with the dogmas of automatic morality which, summed again by the witches' line, 'Fair is foul, and foul is fair,' hover through the fog and filthy air of our prosperous England.

JOHN RUSKIN.

'He hated greetings in the market-place, and there were generally loiterers in the streets to persecute him either about the events of the day, or about some petty pieces of business.'

These lines, which the reader will find near the beginning of the sixteenth chapter of the first volume of the *Antiquary*, contain two indications of the old man's character, which, receiving the ideal of him as a portrait of Scott himself, are of extreme interest to me. They mean essentially that neither Monkbarns nor Scott had any mind to be called of men, Rabbi, in mere hearing of the mob ; and especially that they hated to be drawn back out of their far-away thoughts, or forward out of their long-ago thoughts, by any manner of 'daily' news, whether printed or gabbled. Of which two vital characteristics, deeper in both the men, (for I must always speak of Scott's creations as if they were as real as himself,) than any of their superficial vanities, or passing enthusiasms, I have to speak more at another time. I quote the passage just now, because there was one piece of the daily news of the year 1815 which did extremely interest Scott, and materially direct the labour of the latter part of his life ; nor is there any piece of history in this whole nineteenth century quite so pregnant with various instruction as the study of the reasons which influenced Scott and Byron in their opposite views of the glories of the battle of Waterloo.

But I quote it for another reason also. The principal greeting which Mr. Oldbuck on this occasion receives in the market-place, being compared with the speech of Andrew

Fairservice, examined in my first paper, will furnish me with the text of what I have mainly to say in the present one.

“Mr. Oldbuck,” said the town-clerk (a more important person, who came in front and ventured to stop the old gentleman), “the provost, understanding you were in town, begs on no account that you’ll quit it without seeing him; he wants to speak to ye about bringing the water frae the Fairwell spring through a part o’ your lands.”

“What the deuce!—have they nobody’s land but mine to cut and carve on?—I won’t consent, tell them.”

“And the provost,” said the clerk, going on, without noticing the rebuff, “and the council, wad be agreeable that you should hae the auld stanes at Donagild’s Chapel, that ye was wussing to hae.”

“Eh?—what?—Oho! that’s another story—Well, well, I’ll call upon the provost, and we’ll talk about it.”

“But ye maun speak your mind on’t forthwith, Monk-barns, if ye want the stanes; for Deacon Harlewalls thinks the carved through-stanes might be put with advantage on the front of the new council-house—that is, the twa cross-legged figures that the callants used to ca’ Robbin and Bobbin, ane on ilka door-cheek; and the other stane, that they ca’d Ailie Dailie, abune the door. It will be very tastefu’, the Deacon says, and just in the style of modern Gothic.”

“Good Lord deliver me from this Gothic generation!” exclaimed the Antiquary,—“a monument of a knight-templar on each side of a Grecian porch, and a Madonna on the top of it!—*O crimini!*—Well, tell the provost I wish to have the stones, and we’ll not differ about the water-course.—It’s lucky I happened to come this way to-day.”

‘They parted mutually satisfied; but the wily clerk had most reason to exult in the dexterity he had displayed, since the whole proposal of an exchange between the monuments (which the council had determined to remove as a nuisance, because they encroached three feet upon the public road) and the privilege of conveying the water to the burgh, through the estate of Monkbarns, was an idea which had originated with himself upon the pressure of the moment.’

In this single page of Scott, will the reader please note the kind of prophetic instinct with which the great men of every age mark and forecast its destinies? The water from the Fairwell is the future Thirlmere carried to Manchester; the ‘auld stanes’¹ at Donagild’s Chapel, removed as a *nuisance*,

¹ The following fragments out of the letters in my own possession, written by Scott to the builder of Abbotsford, as the outer decorations of the house were in process of completion, will show how accurately Scott had pictured himself in Monkbarns.

‘Abbotsford: April 21, 1817.

‘Dear Sir,—Nothing can be more obliging than your attention to the old stones. You have been as true as the sundial itself.’ [The sundial had just been erected.] ‘Of the two I would prefer the larger one, as it is to be in front of a parapet quite in the old taste. But in case of accidents it will be safest in your custody till I come to town again on the 12th of May. Your former favours (which were weighty as acceptable) have come safely out here, and will be disposed of with great effect.’

‘Abbotsford: July 30.

‘I fancy the Tolbooth still keeps its feet, but, as it must soon descend, I hope you will remember me. I have an important use for the niche above the door; and, though many a man has got a niche *in* the Tolbooth by building, I believe I am the first that ever got a niche out of it on such an occasion. For which I have to thank your kindness, and to remain very much your obliged humble servant,

‘WALTER SCOTT.’

‘August 16.

‘My dear Sir,—I trouble you with this [*sic*] few lines to thank you for the very accurate drawings and measurements of the Tolbooth door, and for your kind promise to attend to my interest and that of Abbotsford in the matter of the Thistle and Fleur de Lis. Most of our scutcheons are now mounted, and look very well, as the house is something after the model of an old hall (not a castle), where such things are well in character.’ [Alas—Sir Walter, Sir Walter!] ‘I intend the old lion to predominate over a well which the children have christened the Fountain of the Lions. His present den, however, continues to be the hall at Castle Street.’

‘September 5.

‘Dear Sir,—I am greatly obliged to you for securing the stone. I am not sure that I will put up the gate quite in the old form, but I would like to secure the means of doing so. The ornamental stones are now

foretell the necessary view taken by modern cockneyism, Liberalism, and progress, of all things that remind them of the noble dead, of their father's fame, or of their own duty ; and the public road becomes their idol, instead of the saint's shrine. Finally, the roguery of the entire transaction—the mean man seeing the weakness of the honourable, and 'besting' him—in modern slang, in the manner and at the pace of modern trade—'on the pressure of the moment.'

But neither are these things what I have at present quoted the passage for.

I quote it, that we may consider how much wonderful and various history is gathered in the fact, recorded for us in this piece of entirely fair fiction, that in the Scottish borough of Fairport, (Montrose, really,) in the year 17— of Christ, the knowledge given by the pastors and teachers provided for its children by enlightened Scottish Protestantism, of their fathers' history, and the origin of their religion, had resulted in this substance and sum ;—that the statues of two crusading knights had become, to their children, Robin and Bobbin ; and the statue of the Madonna, Ailie Dailie.

A marvellous piece of history, truly : and far too comprehensive for general comment here. Only one small piece of it I must carry forward the readers' thoughts upon.

The pastors and teachers aforesaid, (represented typically in another part of this errorless book by Mr. Blattergowl) are

put up, and have a very happy effect. If you will have the kindness to let me know when the Tolbooth door comes down, I will send in my carts for the stones ; I have an admirable situation for it. I suppose the door itself' [he means, the wooden one] 'will be kept for the new jail ; if not, and not otherwise wanted, I would esteem it curious to possess it. Certainly I hope so many sore hearts will not pass through the celebrated door when in my possession as heretofore.'

'September 8.

'I should esteem it very fortunate if I could have the door also, though I suppose it is modern, having been burned down at the time of Porteous-mob.

'I am very much obliged to the gentlemen who thought these remains of the Heart of Midlothian are not ill bestowed on their intended possessor.'

not, whatever else they may have to answer for, answerable for these names. The names are of the children's own choosing and bestowing, but not of the children's own inventing. 'Robin' is a classically endearing cognomen, recording the *errant* heroism of old days—the name of the Bruce and of Rob Roy. 'Bobbin' is a poetical and symmetrical fulfilment and adornment of the original phrase. 'Ailie' is the last echo of 'Ave,' changed into the softest Scottish Christian name familiar to the children, itself the beautiful feminine form of royal 'Louis;' the 'Dailie' again symmetrically added for kinder and more musical endearment. The last vestiges, you see, of honour for the heroism and religion of their ancestors, lingering on the lips of babes and sucklings.

But what is the meaning of this necessity the children find themselves under of completing the nomenclature rhythmically and rhymingly? Note first the difference carefully, and the attainment of both qualities by the couplets in question. Rhythm is the syllabic and quantitative measure of the words, in which Robin, both in weight and time, balances Bobbin; and Dailie holds level scale with Ailie. But rhyme is the added correspondence of sound; unknown and undesired, so far as we can learn, by the Greek Orpheus, but absolutely essential to, and, as special virtue, becoming titular of, the Scottish Thomas.

The 'Ryme,'¹ you may at first fancy, is the especially childish part of the work. Not so. It is the especially chivalric and Christian part of it. It characterises the Christian chant or canticle, as a higher thing than a Greek ode, melos, or hymnos, or than a Latin carmen.

Think of it, for this again is wonderful! That these children of Montrose should have an element of music in their souls which Homer had not,—which a melos of David the Prophet and King had not,—which Orpheus and Amphion had not,—which Apollo's unrymed oracles became mute at the sound of.

¹ Henceforward, not in affectation, but for the reader's better convenience, I shall continue to spell 'Ryme' without our wrongly added *h*.

A strange new equity this,—melodious justice and judgment as it were,—in all words spoken solemnly and ritualistically by Christian human creatures ;—Robin and Bobbin—by the Crusader's tomb, up to 'Dies iræ, dies illa,' at judgment of the crusading soul.

You have to understand this most deeply of all Christian minstrels, from first to last ; that they are more musical, because more joyful, than any others on earth : ethereal minstrels, pilgrims of the sky, true to the kindred points of heaven and home ; their joy essentially the sky-lark's, in light, in purity ; but, with their human eyes, looking for the glorious appearing of something in the sky, which the bird cannot.

This it is that changes Etruscan murmur into Terza rima—Horatian Latin into Provençal troubadour's melody ; not, because less artful, less wise.

Here is a little bit, for instance, of French ryming just before Chaucer's time—near enough to our own French to be intelligible to us yet.

'O quant très-glorieuse vie,
Quant cil quit ont peut et maistrie,
Veult esprouver pour nécessaire,
Ne pour quant il ne blasma mie
La vie de Marthe sa mie :
Mais il lui donna exemplaire
D'autrement vivre, et de bien plaire
A Dieu ; et plût de bien à faire :
Pour se conclut-il que Marie
Qui estoit à ses piedz sans braire, -
Et pensait d'entendre et de taire,
Estleut la plus saine partie.

La meilleur partie esleut-elle
Et la plus saine et la plus belle,
Qui jà ne luy sera ostée
Car par vérité se fut celle
Qui fut tousjours fresche et nouvelle,
D'aymer Dieu et d'en estre aymée ;
Car jusqu'au cueur fut entamée,
Et si ardamment enflamée,

Que tous-jours ardoit l'estincelle ;
 Par quoi elle fut visitée
 Et de Dieu premier confortée ;
 Car charité est trop ysnelle.'

The only law of *metre*, observed in this song, is that each line shall be octosyllabic :

Qui fut | tousjours | fresche et | nouvelle,
 D'autre | ment vi | vret de | bien (ben) plaire.
 Et pen | soit den | tendret | de taire

But the reader must note that words which were two-syllabled in Latin mostly remain yet so in the French.

La *vi* | *e* de | Marthe | *sa* mie,

although *mie*, which is pet language, loving abbreviation of *amira* through *amie*, remains monosyllabic. But *vie* elides its *e* before a vowel :

Car Mar- | the me | nait *vie* | active
 Et Ma- | ri-e | contemp | lative ;

and custom endures many exceptions. Thus *Marie* may be three-syllabled as above, or answer to *mie* as a dissyllable ; but *vierge* is always, I think, dissyllabic, *vier-ge*, with even stronger accent on the *-ge*, for the Latin *-go*.

Then, secondly, of quantity, there is scarcely any fixed law. The metres may be timed as the minstrel chooses—fast or slow—and the iambic current checked in reverted eddy, as the words chance to come.

But, thirdly, there is to be rich ryming and chiming, no matter how simply got, so only that the words jingle and tingle together with due art of interlacing and answering in different parts of the stanza, correspondent to the involutions of tracery and illumination. The whole twelve-line stanza is thus constructed with two rymes only, six of each, thus arranged :

A A B | A A B | B B A | B B A |

dividing the verse thus into four measures, reversed in ascent and descent, or *descant* more properly ; and doubtless with

correspondent phases in the voice-given, and duly accompanying, or following, music ; Thomas the Rymer's own precept, that 'tong is chefe in mynstrelsy,' being always kept faithfully in mind.¹

Here then you have a sufficient example of the pure chant of the Christian ages ; which is always at heart joyful, and divides itself into the four great forms, Song of Praise, Song of Prayer, Song of Love, and Song of Battle ; praise, however, being the keynote of passion through all the four forms ; according to the first law which I have already given in the laws of Fesolé ; 'all great Art is Praise,' of which the contrary is also true, all foul or miscreant Art is accusation, *διαβολή* : 'She gave me of the tree and I did eat' being an entirely museless expression on Adam's part, the briefly essential contrary of Love-song.

With these four perfect forms of Christian chant, of which we may take for pure examples the 'Te Deum,' the 'Te Lucis Ante,' the 'Amor che nella mente,'² and the 'Chant de Roland,' are mingled songs of mourning, of Pagan origin (whether Greek or Danish), holding grasp still of the races that have once learned them, in times of suffering and sorrow ; and songs of Christian humiliation or grief, regarding chiefly the sufferings of Christ, or the conditions of our own sin : while through the entire system of these musical complaints are interwoven moralities, instructions, and related histories, in illustration of both, passing into Epic and Romantic verse, which gradually, as the forms and learnings of society increase, becomes less joyful, and more didactic, or satiric, until the

¹ L. ii. 278.

² 'Che nella mente mia ragiona.' Love—you observe, the highest *Reasonableness*, instead of French *ivresse*, or even Shakespearian 'mere folly' ; and Beatrice as the Goddess of Wisdom in this third song of the *Convito*, to be compared with the Revolutionary Goddess of Reason ; remembering of the whole poem chiefly the line :—

'Costei penso chi che mosso l'universo.'

(See Lyell's *Canzoniere*, p. 104.)

last echoes of Christian joy and melody vanish in the 'Vanity of human wishes.'

And here I must pause for a minute or two to separate the different branches of our inquiry clearly from one another. For one thing, the reader must please put for the present out of his head all thought of the progress of 'civilisation'—that is to say, broadly, of the substitution of wigs for hair, gas for candles, and steam for legs. This is an entirely distinct matter from the phases of policy and religion. It has nothing to do with the British Constitution, or the French Revolution, or the unification of Italy. There are, indeed, certain subtle relations between the state of mind, for instance, in Venice, which makes her prefer a steamer to a gondola, and that which makes her prefer a gazetteer to a duke; but these relations are not at all to be dealt with until we solemnly understand that whether men shall be Christians and poets, or infidels and dunces, does not depend on the way they cut their hair, tie their breeches, or light their fires. Dr. Johnson might have worn his wig in fulness conforming to his dignity, without therefore coming to the conclusion that human wishes were vain; nor is Queen Antoinette's civilised hair-powder, as opposed to Queen Bertha's savagely loose hair, the cause of Antoinette's laying her head at last in scaffold dust, but Bertha in a pilgrim-haunted tomb.

Again, I have just now used the words 'poet' and 'dunce,' meaning the degree of each quality possible to average human nature. Men are eternally divided into the two classes of poet (believer, maker, and praiser) and dunce (or unbeliever, un-maker, and dispraiser). And in process of ages they have the power of making faithful and formative creatures of themselves, or unfaithful and *deformative*. And this distinction between the creatures who, blessing, are blessed, and evermore *benedicti*, and the creatures who, cursing, are cursed, and evermore *maledicti*, is one going through all humanity; antediluvian in Cain and Abel, diluvian in Ham and Shem. And the question for the public of any given period is not whether they are a constitutional or unconstitutional vulgus, but whether they are a benignant or malignant vulgus. So also, whether it is

indeed the gods who have given any gentleman the grace to despise the rabble, depends wholly on whether it is indeed the rabble, or he, who are the malignant persons.

But yet again. This difference between the persons to whom Heaven, according to Orpheus, has granted 'the hour of delight,'¹ and those whom it has condemned to the hour of detestableness, being, as I have just said, of all times and nations,—it is an interior and more delicate difference which we are examining in the gift of *Christian*, as distinguished from unchristian, song. Orpheus, Pindar, and Horace are indeed distinct from the prosaic rabble, as the bird from the snake; but between Orpheus and Palestrina, Horace and Sidney, there is another division, and a new power of music and song given to the humanity which has hope of the Resurrection.

This is the root of all life and all rightness in Christian harmony, whether of word or instrument; and so literally, that in precise manner as this hope disappears, the power of song is taken away, and taken away utterly. When the Christian falls back out of the bright hope of the Resurrection, even the Orpheus song is forbidden him. Not to have known the hope is blameless: one may sing, unknowing, as the swan, or Philomela. But to have known and fall away from it, and to declare that the human wishes, which are summed in that one—'Thy kingdom come'—are vain! The Fates ordain there shall be no singing after that denial.

For observe this, and earnestly. The old Orphic song, with its dim hope of yet once more Eurydice,—the Philomela song—granted after the cruel silence,—the Halcyon song—with its fifteen days of peace, were all sad, or joyful only in some vague vision of conquest over death. But the Johnsonian vanity of wishes is on the whole satisfactory to Johnson—accepted with gentlemanly resignation by Pope—triumphantly and with bray of penny trumpets and blowing of steam-whistles, proclaimed for the glorious discovery of the civilised ages, by Mrs. Barbauld, Miss Edgeworth, Adam Smith, and

¹ ὥραν τῆς τέρψιος—Plato, *Laros*, ii., Steph. 669. 'Hour' having here nearly the power of 'Fate' with added sense of being a daughter of Themis.

Co. There is no God, but have we not invented gunpowder?—who wants a God, with that in his pocket?' There is no Resurrection, neither angel nor spirit; but have we not paper and pens, and cannot every blockhead print his opinions, and the Day of Judgment become Republican, with everybody for a judge, and the flat of the universe for the throne? There is no law, but only gravitation and congelation, and we are stuck together in an everlasting hail, and melted together in everlasting mud, and great was the day in which our worships were born. And there is no Gospel, but only, whatever we've got, to get more, and, wherever we are, to go somewhere else. And are not these discoveries, to be sung of, and drummed of, and fiddled of, and generally made melodiously indubitable in the eighteenth century song of praise?

The Fates will not have it so. No word of song is possible, in that century, to mortal lips. Only polished versification, sententious pentameter and hexameter, until, having turned out its toes long enough without dancing, and pattered with its lips long enough without piping, suddenly Astræa returns to the earth, and a Day of Judgment of a sort, and there bursts out a song at last again, a most curtly melodious triplet of Amphisbænic ryme. '*Ça ira.*'

Amphisbænic, fanged in each ryme with fire, and obeying Ercildoune's precept, 'Tong is chefe of mynstrelsy,' to the syllable.—Don Giovanni's hitherto fondly chanted 'Andiam, andiam,' become suddenly impersonal and prophetic: It shall go, and you also. A cry—before it is a song, then song and

¹ 'Gunpowder is one of the greatest inventions of modern times, and what has given such a superiority to civilised nations over barbarous'! (*Evenings at Home*—fifth evening.) No man can owe more than I both to Mrs. Barbauld and Miss Edgeworth; and I only wish that in the substance of what they wisely said, they had been more listened to. Nevertheless, the germs of all modern conceit and error respecting manufacture and industry, as rivals to Art and to Genius, are concentrated in '*Evenings at Home*' and '*Harry and Lucy*'—being all the while themselves works of real genius, and prophetic of things that have yet to be learned and fulfilled. See for instance the paper, 'Things by their Right Names,' following the one from which I have just quoted (*The Ship*), and closing the first volume of the old edition of the *Evenings*.

accompaniment together—perfectly done; and the march ‘towards the field of Mars. The two hundred and fifty thousand—they to the sound of stringed music—preceded by young girls with tricolor streamers, they have shouldered soldier-wise their shovels and picks, and with one throat are singing *Ça ira.*’¹

Through all the springtime of 1790, ‘from Brittany to Burgundy, on most plains of France, under most city walls, there march and constitutionally wheel to the *Ça-iraing* mood of fife and drum—our clear glancing phalanxes;—the song of the two hundred and fifty thousand, virgin led, is in the long light of July.’ Nevertheless, another song is yet needed, for phalanx, and for maid. For, two springs and summers having gone—amphisbænic,—on the 28th of August 1792, ‘Dumouriez rode from the camp of Maulde, eastwards to *Sedan.*’²

And Longwi has fallen basely, and Brunswick and the Prussian king will beleaguer Verdun, and Clairfait and the Austrians press deeper in over the northern marches, Cimmerian Europe behind. And on that same night Dumouriez assembles council of war at his lodgings in Sedan. Prussians here, Austrians there, triumphant both. With broad highway to Paris and little hindrance—we scattered, helpless here and there—what to advise? The generals advise retreating, and retreating till Paris be sacked at the latest day possible. Dumouriez, silent, dismisses *them*,—keeps only, with a sign, Thouvenot. Silent, thus, when needful, yet having voice, it appears, of what musicians call tenor-quality, of a rare kind. Rubini-esque, even, but scarcely producible to fastidious ears at opera. The seizure of the forest of Argonne follows—the cannonade of Valmy. The Prussians do not march on Paris *this* time, the autumnal hours of fate pass on—*ça ira*—and on the 6th of November, Dumouriez meets the Austrians also. ‘Dumouriez wide-winged, they wide-winged—at and around Jemappes, its green heights fringed and maned with red fire. And Dumouriez is swept back on this wing and swept back

¹ Carlyle, *French Revolution* (Chapman, 1869), vol. ii. p. 70; conf. p. 25, and the *Ça ira* at Arras, vol. iii. p. 276.

² *Ibid.* iii. 26.

on that, and is like to be swept back utterly, when he rushes up in person, speaks a prompt word or two, and then, with clear tenor-pipe, uplifts the hymn of the Marseillaise, ten thousand tenor or bass pipes joining, or say some forty thousand in all, for every heart leaps up at the sound ; and so, with rhythmic march melody, they rally, they advance, they rush death-defying, and like the fire whirlwind sweep all manner of Austrians from the scene of action.' Thus, through the lips of Dumouriez, sings Tyrtæus, Rouget de Lisle,¹ 'Aux armes—marchons !' Iambic measure with a witness ! in what wide strophe here beginning—in what unthought-of antistrophe returning to that council chamber in Sedan !

While these two great songs were thus being composed, and sung, and danced to in cometary cycle, by the French nation, here in our less giddy island there rose, amidst hours of business in Scotland and of idleness in England, three troubadours of quite different temper. Different also themselves, but not opponent ; forming a perfect chord, and adverse all the three of them alike to the French musicians, in this main point—that while the *Ça ira* and Marseillaise were essentially songs of blame and wrath, the British bards wrote, virtually, always songs of praise, though by no means psalmody in the ancient keys. On the contrary, all the three are alike moved by a singular antipathy to the priests, and are pointed at with fear and indignation by the pietists, of their day ;—not without latent cause. For they are all of them, with the most loving service, servants of that world which the Puritan and monk alike despised ; and, in the triple chord of their song, could not but appear to the religious persons around them as respectively and specifically the praisers—Scott of the world, Burns of the flesh, and Byron of the devil.

To contend with this carnal orchestra, the religious world, having long ago rejected its Catholic Psalms as antiquated and unscientific, and finding its Puritan melodies sunk into faint jar and twangle from their native trumpet-tone, had nothing to oppose but the innocent, rather than religious,

¹ Carlyle, *French Revolution*, iii. 106, the last sentence altered in a word or two.

verses of the school recognised as that of the English Lakes ; very creditable to them ; domestic at once and refined ; observing the errors of the world outside of the Lakes with a pitying and tender indignation, and arriving in lacustrine seclusion at many valuable principles of philosophy, as pure as the tarns of their mountains, and of corresponding depth.¹

I have lately seen, and with extreme pleasure, Mr. Matthew Arnold's arrangement of Wordsworth's poems ; and read with sincere interest his high estimate of them. But a great poet's work never needs arrangement by other hands ; and though it is very proper that Silver How should clearly understand and brightly praise its fraternal Rydal Mount, we must not forget that, over yonder, are the Andes, all the while.

Wordsworth's rank and scale among poets were determined by himself, in a single exclamation :—

‘What was the great Parnassus’ self to thee,
Mount Skiddaw?’

Answer his question faithfully, and you have the relation between the great masters of the Muse's teaching, and the pleasant fingerer of his pastoral flute among the reeds of Rydal.

Wordsworth is simply a Westmoreland peasant, with considerably less shrewdness than most border Englishmen or Scotsmen inherit ; and no sense of humour : but gifted (in this singularly) with vivid sense of natural beauty, and a pretty turn for reflections, not always acute, but, as far as they reach, medicinal to the fever of the restless and corrupted life around him. Water to parched lips may be better than Samian wine, but do not let us therefore confuse the qualities of wine and water. I much doubt there being many inglorious Miltons in our country churchyards ; but I am very sure there are many Wordsworths resting there, who were inferior to the renowned one only in caring less to hear themselves talk.

¹ I have been greatly disappointed, in taking soundings of our most majestic mountain pools, to find them, in no case, verge on the unfathomable.

With an honest and kindly heart, a stimulating egoism, a wholesome contentment in modest circumstances, and such sufficient ease, in that accepted state, as permitted the passing of a good deal of time in wishing that daisies could see the beauty of their own shadows, and other such profitable mental exercises, Wordsworth has left us a series of studies of the graceful and happy shepherd life of our lake country, which to me personally, for one, are entirely sweet and precious ; but they are only so as the mirror of an existent reality in many ways more beautiful than its picture.

But the other day I went for an afternoon's rest into the cottage of one of our country people of old statesman class ; cottage lying nearly midway between two village churches, but more conveniently for downhill walk towards one than the other. I found, as the good housewife made tea for me, that nevertheless she went up the hill to church. 'Why do not you go to the nearer church?' I asked. 'Don't you like the clergyman?' 'Oh no, sir,' she answered, 'it isn't that ; but you know I couldn't leave my mother.' 'Your mother ! she is buried at H—— then?' 'Yes, sir ; and you know I couldn't go to church anywhere else.'

That feelings such as these existed among the peasants, not of Cumberland only, but of all the tender earth that gives forth her fruit for the living, and receives her dead to peace, might perhaps have been, to our great and endless comfort, discovered before now, if Wordsworth had been content to tell us what he knew of his own villages and people, not as the leader of a new and only correct school of poetry, but simply as a country gentleman of sense and feeling, fond of primroses, kind to the parish children, and reverent of the spade with which Wilkinson had tilled his lands : and I am by no means sure that his influence on the stronger minds of his time was anywise hastened or extended by the spirit of tunefulness under whose guidance he discovered that heaven rhymed to seven, and Foy to boy.

Tuneful nevertheless at heart, and of the heavenly choir, I gladly and frankly acknowledge him ; and our English literature enriched with a new and a singular virtue in the aerial

purity and healthful rightness of his quiet song ;—but *aerial* only,—not ethereal ; and lowly in its privacy of light.

A measured mind, and calm ; innocent, unrepentant ; helpful to sinless creatures and scatheless, such of the flock as do not stray. Hopeful at least, if not faithful ; content with intimations of immortality such as may be in skipping of lambs, and laughter of children,—incurious to see in the hands the print of the Nails.

A gracious and constant mind ; as the herbage of its native hills, fragrant and pure ;—yet, to the sweep and the shadow, the stress and distress, of the greater souls of men, as the tufted thyme to the laurel wilderness of Tempe,—as the gleaming euphrasy to the dark branches of Dodona.

[I am obliged to defer the main body of this paper to next month,—revises penetrating all too late into my lacustrine seclusion ; as chanced also unluckily with the preceding paper, in which the reader will perhaps kindly correct the consequent misprints, p. 29, l. 20, of ‘scarcely’ to ‘securely,’ and p. 31, l. 34, ‘full,’ with comma, to ‘fall,’ without one ; noticing besides that *Redgauntlet* has been omitted in the italicised list, p. 25, l. 16 ; and that the reference to note 2 should not be at the word ‘imagination,’ p. 24, but at the word ‘trade,’ p. 25, l. 7. My dear old friend, Dr. John Brown, sends me, from Jamieson’s *Dictionary*, the following satisfactory end to one of my difficulties :—‘Coup the crans.’ The language is borrowed from the ‘cran,’ or trivet on which small pots are placed in cookery, which is sometimes turned with its feet uppermost by an awkward assistant. Thus it signifies to be *completely* upset.]

JOHN RUSKIN.

[BYRON.]

‘Parching summer hath no warrant
To consume this crystal well ;
Rains, that make each brook a torrent,
Neither sully it, nor swell.’

So WAS it, year by year, among the unthought-of hills. Little Duddon and child Rotha ran clear and glad ; and laughed

from ledge to pool, and opened from pool to mere, translucent, through endless days of peace.

But eastward, between her orchard plains, Loire locked her embracing dead in silent sands; dark with blood rolled Iser; glacial-pale, Beresina-Lethe, by whose shore the weary hearts forgot their people, and their father's house.

Nor unsullied, Tiber; nor unsworn, Arno and Aufidus; and Euroclydon high on Helle's wave; meantime, let our happy piety glorify the garden rocks with snowdrop circlet, and breathe the spirit of Paradise, where life is wise and innocent.

Maps many have we, now-a-days clear in display of earth constituent, air current, and ocean tide. Shall we ever engrave the map of meaner research, whose shadings shall content themselves in the task of showing the depth, or drought, —the calm, or trouble, of Human Compassion?

For this is indeed all that is noble in the life of Man, and the source of all that is noble in the speech of Man. Had it narrowed itself then, in those days, out of all the world, into this peninsula between Cockermouth and Shap?

Not altogether so; but indeed the *Vocal* piety seemed conclusively to have retired (or excursed?) into that mossy hermitage, above Little Langdale. The *Unvocal* piety, with the uncomplaining sorrow, of Man, may have had a somewhat wider range, for aught we know: but history disregards those items; and of firmly proclaimed and sweetly canorous religion, there really seemed at that juncture none to be reckoned upon, east of Ingleborough, or north of Criffel. Only under Furness Fells, or by Bolton Priory, it seems we can still write Ecclesiastical Sonnets, stanzas on the force of Prayer, Odes to Duty, and complimentary addresses to the Deity upon His endurance for adoration. Far otherwise, over yonder, by Spezzia Bay, and Ravenna Pineta, and in ravines of Hartz. There, the softest voices speak the wildest words; and Keats discourses of Endymion, Shelley of Demogorgon, Goethe of Lucifer, and Bürger of the Resurrection of Death unto Death—while even Puritan Scotland and Episcopal Anglia produce for us only these three minstrels of doubtful tone, who show but small respect for the 'unco guid,' put but limited faith in gifted

Gilfillan, and translate with unflinching frankness the *Morgante Maggiore*.¹

Dismal the aspect of the spiritual world, or at least the sound of it, might well seem to the eyes and ears of Saints (such as we had) of the period—dismal in angels' eyes also assuredly! Yet is it possible that the dismalness in angelic sight may be otherwise quartered, as it were, from the way of mortal heraldry; and that seen, and heard, of angels,—again I say—hesitatingly—is it possible that the goodness of the Unco Guid, and the gift of Gilfillan, and the word of Mr. Blattergowl, may severally not have been the goodness of God, the gift of God, nor the word of God: but that in the much blotted and broken efforts at goodness, and in the careless gift which they themselves despised,² and in the sweet ryme and murmur of their unpurposed words, the Spirit of the Lord had, indeed, wandering, as in chaos days on lightless waters, gone forth in the hearts and from the lips of those other three strange prophets, even though they ate forbidden bread by the altar of the poured-out ashes, and even though the wild beast of the desert found them, and slew.

This, at least, I know, that it had been well for England, though all her other prophets, of the Press, the Parliament, the Doctor's chair, and the Bishop's throne, had fallen silent; so only that she had been able to understand with her heart here and there the simplest line of these, her despised.

¹ 'It must be put by the original, stanza for stanza, and verse for verse; and you will see what was permitted in a Catholic country and a bigoted age to Churchmen, on the score of Religion—and so tell those buffoons who accuse me of attacking the Liturgy.'

'I write in the greatest haste, it being the hour of the Corso, and I must go and buffoon with the fest. My daughter Allegra is just gone with the Countess G. in Count G.'s coach and six. Our old Cardinal is dead, and the new one not appointed yet—but the masquing goes on the same.' (Letter to Murray, 355th in Moore, dated Ravenna, Feb. 7, 1828.) 'A dreadfully moral place, for you must not look at anybody's wife, except your neighbour's'

² See quoted *infra* the mock, by Byron, of himself and all other modern poets, *Juan*, canto iii. stanza 86, and compare canto xiv. stanza 8. In reference of future quotations the first numeral will stand always for canto; the second for stanza; the third, if necessary, for line.

I take one at mere chance :

‘Who thinks of self, when gazing on the sky?’¹

Well, I don't know ; Mr. Wordsworth certainly did, and observed, with truth, that its clouds took a sober colouring in consequence of his experiences. It is much if, indeed, this sadness be unselfish, and our eyes *have* kept loving watch o'er Man's Mortality. I have found it difficult to make any one now-a-days believe that such sobriety can be ; and that Turner saw deeper crimson than others in the clouds of Goldau. But that any should yet think the clouds brightened by Man's Immortality instead of dulled by his death,—and, gazing on the sky, look for the day when every eye must gaze also—for behold, He cometh with the clouds—this it is no more possible for Christian England to apprehend, however exhorted by her gifted and guid.

‘But Byron was not thinking of such things!’—He, the reprobate ! how should such as he think of Christ ?

Perhaps not wholly as you or I think of Him. Take, at chance, another line or two, to try :

‘Carnage (so Wordsworth tells you) is God's daughter ;²
If *he* speak truth, she is Christ's sister, and
Just now, behaved as in the Holy Land.’

Blasphemy, cry you, good reader ? Are you sure you understand it ? The first line I gave you was easy Byron—almost shallow Byron—these are of the man in his depth, and you will not fathom them, like a tarn,—nor in a hurry.

‘Just now behaved as in the Holy Land.’ How *did* Carnage behave in the Holy Land then ? You have all been greatly questioning, of late, whether the sun, which you find to be now going out, ever stood still. Did you in any lagging minute, on those scientific occasions, chance to reflect what he

¹ *Island*, ii. 16, where see context.

² *Juan*, viii. 5 ; but, by your Lordship's quotation, Wordsworth says ‘instrument’—not ‘daughter.’ Your Lordship had better have said ‘Infant’ and taken the Woolwich authorities to witness : only Infant would not have rymed.

was bid stand still *for?* or if not—will you please look—and what, also, going forth again as a strong man to run his course, he saw, rejoicing?

‘Then Joshua passed from Makkedah unto Libnah—and fought against Libnah. And the Lord delivered it and the king thereof into the hand of Israel, and he smote it with the edge of the sword, and all the souls that were therein.’ And from Lachish to Eglon, and from Eglon to Kirjath-Arba, and Sarah’s grave in the Amorites’ land, ‘and Joshua smote all the country of the hills and of the south—and of the vale and of the springs, and all their kings; he left none remaining, but utterly destroyed all that breathed—as the Lord God of Israel commanded.’

Thus ‘it is written:’ though you perhaps do not so often hear *these* texts preached from, as certain others about taking away the sins of the world. I wonder how the world would like to part with them! hitherto it has always preferred parting first with its Life—and God has taken it at its word. But Death is not *His* Begotten Son, for all that; nor is the death of the innocent in battle carnage His ‘instrument for working out a pure intent’ as Mr. Wordsworth puts it; but Man’s instrument for working out an impure one, as Byron would have you to know. Theology perhaps less orthodox, but certainly more reverent;—neither is the Woolwich Infant a Child of God; neither does the iron-clad ‘Thunderer’ utter thunders of God—which facts, if you had had the grace or sense to learn from Byron, instead of accusing him of blasphemy, it had been better at this day for *you*, and for many a savage soul also, by Euxine shore, and in Zulu and Afghan lands.

It was neither, however, for the theology, nor the use, of these lines that I quoted them; but to note this main point of Byron’s own character. He was the first great Englishman who felt the cruelty of war, and, in its cruelty, the shame. Its guilt had been known to George Fox—its folly shown practically by Penn. But the *compassion* of the pious world had still for the most part been shown only in keeping its stock of Barabbases unchanged if possible: and, till Byron

came, neither Kunersdorf, Eylau, nor Waterloo, had taught the pity and the pride of men that

‘The drying up a single tear has more
Of honest fame than shedding seas of gore.’¹

Such pacific verse would not indeed have been acceptable to the Edinburgh volunteers on Portobello sands. But Byron can write a battle song too, when it is *his* cue to fight. If you look at the introduction to the *Isles of Greece*, namely the 85th and 86th stanzas of the 3rd canto of *Don Juan*,—you will find—what will you *not* find, if only you understand them! ‘He’ in the first line, remember, means the typical modern poet.

‘Thus usually, when he was asked to sing,
He gave the different nations something national.
’Twas all the same to him—“God save the King”
Or “Ça ira” according to the fashion all;
His muse made increment of anything
From the high lyric down to the low rational:
If Pindar sang horse-races, what should hinder
Himself from being as pliable as Pindar?

‘In France, for instance, he would write a chanson;
In England a six-canto quarto tale;
In Spain, he’d make a ballad or romance on
The last war—much the same in Portugal;
In Germany, the Pegasus he’d prance on
Would be old Goethe’s—(see what says de Staël)
In Italy he’d ape the ‘Trecentisti’;
In Greece, he’d sing some sort of hymn like this t’ ye.

Note first here, as we did in Scott, the concentrating and foretelling power. The ‘God Save the Queen’ in England, fallen hollow now, as the ‘Ça ira’ in France—not a man in

¹ *Juan*, viii. 3; compare 14 and 63, with all its lovely context 61—68: then 82, and afterwards slowly and with thorough attention, the Devil’s speech, beginning, ‘Yes, Sir, you forget’ in scene 2 of *The Deformed Transformed*: then Sardanapalus’s, act i. scene 2, beginning ‘he is gone, and on his finger bears my signet,’ and finally, the *Vision of Judgment*, stanzas 3 to 5.

France knowing where either France or 'that' (whatever 'that' may be) is going to; nor the Queen of England daring, for her life, to ask the tiniest Englishman to do a single thing he doesn't like;—nor any salvation, either of Queen or Realm, being any more possible to God, unless under the direction of the Royal Society: then, note the estimate of height and depth in poetry, swept in an instant, 'high lyric to low rational.' Pindar to Pope (knowing Pope's height, too, all the while, no man better); then, the poetic power of France—resumed in a word—Béranger; then the cut at Marmion, entirely deserved, as we shall see, yet kindly given, for everything he names in these two stanzas is the best of its kind; then Romance in Spain on—the *last* war, (*present* war not being to Spanish poetical taste), then, Goethe the real heart of all Germany, and last, the aping of the Trecentisti which has since consummated itself in Pre-Raphaelitism! that also being the best thing Italy has done through England, whether in Rossetti's 'blessed damozels' or Burne Jones's 'days of creation.' Lastly comes the mock at himself—the modern English Greek—(followed up by the 'degenerate into hands like mine' in the song itself); and then—to amazement, forth he thunders in his Achilles voice. We have had one line of him in his clearness—five of him in his depth—sixteen of him in his play. Hear now but these, out of his whole heart:—

'What,—silent yet? and silent *all*?
 Ah no, the voices of the dead
 Sound like a distant torrent's fall,
 And answer, "Let *one* living head,
 But one, arise—we come—we come: "
 —'Tis but the living who are dumb.'

Resurrection, this, you see like Bürger's; but not of death unto death.

'Sound like a distant torrent's fall.' I said the *whole* heart of Byron was in this passage. First its compassion, then its indignation, and the third element, not yet examined, that love of the beauty of this world in which the three—unholy

—children, of its Fiery Furnace were like to each other ; but Byron the widest-hearted. Scott and Burns love Scotland more than Nature itself : for Burns the moon must rise over Cumnock Hills,—for Scott, the Rymer's glen divide the Eildons ; but, for Byron, Loch-na-Gar *with Ida*, looks o'er Troy, and the soft murmurs of the Dee and the Bruar change into voices of the dead on distant Marathon.

Yet take the parallel from Scott, by a field of homelier rest :—

‘ And silence aids—though the steep hills
Send to the lake a thousand rills ;
In summer tide, so soft they weep,
The sound but lulls the ear asleep ;
Your horse's hoof-tread sounds too rude,
So stillly is the solitude.

Naught living meets the eye or ear,
But well I ween the dead are near ;
For though, in feudal strife, a foe
Hath laid our Lady's Chapel low,
Yet still beneath the hallowed soil,
The peasant rests him from his toil,
And, dying, bids his bones be laid
Where erst his simple fathers prayed.’

And last take the same note of sorrow—with Burns's finger on the fall of it:

‘ Mourn, ilka grove the cushat kens,
Ye hazly shaws and briery dens,
Ye burnies, wimplin' down your glens
Wi' toddlin' din,
Or foamin' strang wi' hasty stens
Frae lin to lin.’

As you read, one after another, these fragments of chant by the great masters, does not a sense come upon you of some element in their passion, no less than in their sound, different, specifically, from that of ‘Parching summer hath no warrant’? Is it more profane, think you—or more tender—nay, perhaps, in the core of it, more true?

For instance, when we are told that

‘ Wharfe, as he moved along,
To matins joined a mournful voice,’

is this disposition of the river’s mind to pensive psalmody quite logically accounted for by the previous statement, (itself by no means rhythmically dulcet,) that

‘ The boy is in the arms of Wharfe,
And strangled by a merciless force ’ ?

Or, when we are led into the improving reflection,

‘ How sweet were leisure, could it yield no more
Then ’mid this wave-washed churchyard to recline,
From pastoral graves extracting thoughts divine ! ’

—is the divinity of the extract assured to us by its being made at leisure, and in a reclining attitude—as compared with the meditations of otherwise active men, in an erect one ? Or are we perchance, many of us, still erring somewhat in our notions alike of Divinity and Humanity,—poetical extraction, and moral position ?

On the chance of its being so, might I ask hearing for just a few words more of the school of Belial ?

Their occasion, it must be confessed, is a quite unjustifiable one. Some very wicked people—mutineers, in fact—have retired, misanthropically, into an unfrequented part of the country, and there find themselves safe, indeed, but extremely thirsty. Whereupon Byron thus gives them to drink :

‘ A little stream came tumbling from the height
And straggling into ocean as it might.
Its bounding crystal frolicked in the ray
And gushed from cliff to crag with saltless spray,
Close on the wild wide ocean,—yet as pure
And fresh as Innocence ; and more secure.
Its silver torrent glittered o’er the deep
As the shy chamois’ eye o’erlooks the steep,
While, far below, the vast and sullen swell
Of ocean’s Alpine azure rose and fell.’¹

¹ *Island*, iii. 3, and compare, of shore surf, the ‘slings its high flakes, shivered into sleet’ of stanza 7.

Now, I beg, with such authority as an old workman may take concerning his trade, having also looked at a waterfall or two in my time, and not unfrequently at a wave, to assure the reader that here *is* entirely first-rate literary work. Though Lucifer himself had written it, the thing is itself good, and not only so, but unsurpassably good, the closing line being probably the best concerning the sea yet written by the race of the sea-kings.

But Lucifer himself *could* not have written it ; neither any servant of Lucifer. I do not doubt but that most readers were surprised at my saying, in the close of my first paper, that Byron's 'style' depended in any wise on his views respecting the Ten Commandments. That so all-important a thing as 'style' should depend in the least upon so ridiculous a thing as moral sense : or that Allegra's father, watching her drive by in Count G.'s coach and six, had any remnant of so ridiculous a thing to guide,—or check,—his poetical passion, may alike seem more than questionable to the liberal and chaste philosophy of the existing British public. But, first of all, putting the question of who writes, or speaks, aside, do you, good reader, *know* good 'style' when you get it ? Can you say, of half-a-dozen given lines taken anywhere out of a novel, or poem, or play, That is good, essentially, in style, or bad, essentially ? and can you say why such half-dozen lines are good, or bad ?

I imagine that in most cases, the reply would be given with hesitation, yet if you will give me a little patience, and take some accurate pains, I can show you the main tests of style in the space of a couple of pages.

I take two examples of absolutely perfect, and in manner highest, *i. e.* kingly, and heroic, style : the first example in expression of anger, the second of love.

- (1) 'We are glad the Dauphin is so pleasant with us,
His present, and your pains, we thank you for.
When we have match'd our rackets to these balls,
We will in France, by God's grace, play a set,
Shall strike his father's crown into the hazard.'

(2) 'My gracious Silence, hail!

Would'st thou have laughed, had I come coffin'd home
That weep'st to see me triumph? Ah, my dear,
Such eyes the widows in Corioli wear,
And mothers that lack sons.'

Let us note, point by point, the conditions of greatness common to both these passages, so opposite in temper.

A. Absolute command over all passion, however intense; this the first-of-first conditions, (see the King's own sentence just before, 'We are no tyrant, but a Christian King, Unto whose grace our passion is as subject As are our wretches fettered in our prisons'); and with this self-command, the supremely surveying grasp of every thought that is to be uttered, before its utterance; so that each may come in its exact place, time, and connection. The slightest hurry, the misplacing of a word, or the unnecessary accent on a syllable, would destroy the 'style' in an instant.

B. Choice of the fewest and simplest words that can be found in the compass of the language, to express the thing meant: these few words being also arranged in the most straightforward and intelligible way; allowing inversion only when the subject can be made primary without obscurity: (thus, 'his present, and your pains, we thank you for' is better than 'we thank you for his present and your pains,' because the Dauphin's gift is by courtesy put before the Ambassador's pains; but 'when to these balls our rackets we have matched' would have spoiled the style in a moment, because—I was going to have said, ball and racket are of equal rank, and therefore only the natural order proper; but also here the natural order is the desired one, the English racket to have precedence of the French ball. In the fourth line the 'in France' comes first, as announcing the most important resolution of action; the 'by God's grace' next, as the only condition rendering resolution possible; the detail of issue follows with the strictest limit in the final word. The King does not say 'danger,' far less 'dishonour,' but 'hazard' only; of *that* he is, humanly speaking, sure.

C. Perfectly emphatic and clear utterance of the chosen

words ; slowly in the degree of their importance, with omission however of every word not absolutely required ; and natural use of the familiar contractions of final dissyllable. Thus, 'play a set shall strike' is better than 'play a set *that* shall strike,' and 'match'd' is kingly short—no necessity could have excused 'matched' instead. On the contrary, the three first words, 'We are glad,' would have been spoken by the king more slowly and fully than any other syllables in the whole passage, first pronouncing the kingly 'we' at its proudest, and then the 'are' as a continuous state, and then the 'glad,' as the exact contrary of what the ambassadors expected him to be.¹

D. Absolute spontaneity in doing all this, easily and necessarily as the heart beats. The king *cannot* speak otherwise than he does—nor the hero. The words not merely come to them, but are compelled to them. Even lisping numbers 'come,' but mighty numbers are ordained, and inspired.

E. Melody in the words, changeable with their passion fitted to it exactly and the utmost of which the language is capable—the melody in prose being Eolian and variable—in verse, nobler by submitting itself to stricter law. I will enlarge upon this point presently.

F. Utmost spiritual contents in the words ; so that each carries not only its instant meaning, but a cloudy companionship of higher or darker meaning according to the passion—nearly always indicated by metaphor : 'play a set'—sometimes by abstraction—(thus in the second passage 'silence' for silent one) sometimes by description instead of direct epithet ('coffined' for dead) but always indicative of there being more in the speaker's mind than he has said, or than he can say, full though his saying be. On the quantity of this attendant fulness depends the majesty of style ; that is to

¹ A modern editor—of whom I will not use the expressions which occur to me—finding the 'we' a redundant syllable in the iambic line, prints 'we're.' It is a little thing—but I do not recollect, in the forty years of my literary experience, any piece of editor's retouch quite so base. But I don't read the new editions much ; that must be allowed for.

say, virtually, on the quantity of contained thought in briefest words, such thought being primarily loving and true: and this the sum of all—that nothing can be well said, but with truth, nor beautifully, but by love.

These are the essential conditions of noble speech in prose and verse alike, but the adoption of the form of verse, and especially rymed verse, means the addition to all these qualities of one more; of music, that is to say, not Eolian merely, but Apolline; a construction or architecture of words fitted and befitting, under external laws of time and harmony.

When Byron says ‘rhyme is of the rude,’¹ he means that Burns needs it,—while Henry the Fifth does not, nor Plato, nor Isaiah—yet in this need of it by the simple, it becomes all the more religious: and thus the loveliest pieces of Christian language are all in ryme—the best of Dante, Chaucer, Douglas, Shakespeare, Spenser, and Sidney.

I am not now able to keep abreast with the tide of modern scholarship; (nor, to say the truth, do I make the effort, the

¹ *Island*, ii. 5. I was going to say, ‘Look to the context.’ but am fain to give it here; for the stanza, learned by heart, ought to be our school-introduction to the literature of the world.

‘Such was this ditty of Tradition’s days,
Which to the dead a lingering fame conveys
In song, where fame as yet hath left no sign
Beyond the sound whose charm is half divine;
Which leaves no record to the sceptic eye,
But yields young history all to harmony;
A boy Achilles, with the centaur’s lyre
In hand, to teach him to surpass his sire.
For one long-cherish’d ballad’s simple stave
Rung from the rock, or mingled with the wave,
Or from the bubbling streamlet’s grassy side,
Or gathering mountain echoes as they glide,
Hath greater power o’er each true heart and ear,
Than all the columns Conquest’s minions rear;
Invites, when hieroglyphics are a theme
For sages’ labours or the student’s dream;
Attracts, when History’s volumes are a toil—
The first, the freshest bud of Feeling’s soil.
Such was this rude rhyme—rhyme is of the rude,
But such inspired the Norseman’s solitude,
Who came and conquer’d; such, wherever rise
Lands which no foes destroy or civilise,
Exist; and what can our accomplish’d art
Of verse do more than reach the awaken’d heart?’

first edge of its waves being mostly muddy, and apt to make a shallow sweep of the shore refuse :) so that I have no better book of reference by me than the confused essay on the antiquity of ryme at the end of Turner's *Anglo-Saxons*. I cannot however conceive a more interesting piece of work, if not yet done, than the collection of sifted earliest fragments known of rymed song in European languages. Of Eastern I know nothing ; but, this side Hellespont, the substance of the matter is all given in King Canute's impromptu

'Gaily (or is it sweetly ?—I forget which, and it's no matter) sang the
monks of Ely,
As Knut the king came sailing by ;'

much to be noted by any who make their religion lugubrious, and their Sunday the eclipse of the week. And observe further, that if Milton does not ryme, it is because his faculty of Song was concerning Loss, chiefly ; and he has little more than faculty of Croak, concerning Gain ; while Dante, though modern readers never go further with him than into the Pit, is stayed only by Casella in the ascent to the Rose of Heaven. So, Gibbon can write in *his* manner the Fall of Rome ; but Virgil, in *his* manner, the rise of it ; and finally Douglas, in *his* manner, bursts into such rymed passion of praise both of Rome and Virgil, as befits a Christian Bishop, and a good subject of the Holy See.

'Master of Masters—sweet source, and springing well,
Wide where over all ringes thy heavenly bell ;

Why should I then with dull forehead and vain,
With rude ingene, and barane, emptive brain,
With bad harsh speech, and lewit barbare tongue
Presume to write, where thy sweet bell is rung,
Or counterfeit thy precious wordis dear?
Na, na—not so ; but kneel when I them hear.
But farther moe—and lower to descend
Forgive me, Virgil, if I thee offend
Pardon thy scolar, suffer him to ryme
Since *thou* wast but ane mortal man sometime.'

‘Before honour is humility.’ Does not clearer light come for you on that law after reading these nobly pious words? And note you *whose* humility? How is it that the sound of the bell comes so instinctively into his chiming verse? This gentle singer is the son of—Archibald Bell-the-Cat!

And now perhaps you can read with right sympathy the scene in *Marmion* between his father and King James.

‘His hand the monarch sudden took—
Now, by the Bruce’s soul,
Angus, my hasty speech forgive,
For sure as doth his spirit live
As he said of the Douglas old
I well may say of you,—
That never king did subject hold,
In speech more free, in war more bold,
More tender and more true:
And while the king his hand did strain
The old man’s tears fell down like rain.’

I believe the most infidel of scholastic readers can scarcely but perceive the relation between the sweetness, simplicity, and melody of expression in these passages, and the gentleness of the passions they express, while men who are not scholastic, and yet are true scholars, will recognise further in them that the simplicity of the educated is lovelier than the simplicity of the rude. Hear next a piece of Spenser’s teaching how rudeness itself may become more beautiful even by its mistakes, if the mistakes are made lovingly.

‘Ye shepherds’ daughters that dwell on the green,
Hye you there apace;
Let none come there but that virgins been
To adorn her grace:
And when you come, whereas she in place,
See that your rudeness do not you disgrace;
Bind your fillets fast,
And gird in your waste,
For more fineness, with a taudry lace.’

‘Bring hither the pink and purple cullumbine
 With gylliflowers ;
 Bring coronatiōns, and sops in wine,
 Worn of paramours ;
 Strow me the ground with daffadownhillies
 And cowslips, and kingcups, and loved lilies ;
 The pretty paunce
 And the chevisaunce
 Shall match with the fair flowre-delice.’¹

Two short pieces more only of master song, and we have enough to test all by.

(2) ‘No more, no more, since thou art dead,
 Shall we e’er bring coy brides to bed,
 No more, at yearly festivals,
 We cowslip balls
 Or chains of columbines shall make,
 For this or that occasion’s sake.
 No, no! our maiden pleasures be
 Wrapt in thy winding-sheet with thee.’²

(3) ‘Death is now the phoenix rest,
 And the turtle’s loyal breast
 To eternity doth rest.
 Truth may seem, but cannot be ;
 Beauty brag, but ’tis not she :
 Truth and beauty buried be.’³

If now, with the echo of these perfect verses in your mind, you turn to Byron, and glance over, or recall to memory, enough of him to give means of exact comparison, you will, or should, recognise these following kinds of mischief in him. First, if any one offends him—as for instance Mr. Southey, or Lord Elgin—‘his manners have not that repose that marks the caste,’ &c. This defect in his Lordship’s style, being my-

¹ *Shepherd’s Calendar*. ‘Coronatiōn,’ loyal-pastoral for Carnation ; ‘sops in wine,’ jolly-pastoral for double pink ; ‘paunce,’ thoughtless pastoral for pansy ; ‘chevisaunce’ I don’t know, (not in Gerard) ; ‘flowre-delice’—pronounce dellice—half made up of ‘delicate’ and ‘delicious.’

² Herrick, *Dirge for Jephthah’s Daughter*.

³ *Passionate Pilgrim*.

self scrupulously and even painfully reserved in the use of vituperative language, I need not say how deeply I deplore.¹

Secondly. In the best and most violet-bedded bits of his work there is yet, as compared with Elizabethan and earlier verse, a strange taint ; and indefinable—evening flavour of Covent Garden, as it were ;—not to say, escape of gas in the Strand. That is simply what it proclaims itself—London air. If he had lived all his life in Green-head Ghyll, things would of course have been different. But it was his fate to come to town—modern town—like Michael's son ; and modern London (and Venice) are answerable for the state of their drains, not Byron.

Thirdly. His melancholy is without any relief whatsoever ; his jest sadder than his earnest ; while, in Elizabethan work, all lament is full of hope, and all pain of balsam.

Of this evil he has himself told you the cause in a single line, prophetic of all things since and now. 'Where *he* gazed, a gloom pervaded space.'²

So that, for instance, while Mr. Wordsworth, on a visit to town, being an exemplary early riser, could walk, felicitous, on Westminster Bridge, remarking how the city now did like a garment wear the beauty of the morning ; Byron, rising somewhat later, contemplated only the garment which the beauty of the morning had by that time received for wear from the city : and again, while Mr. Wordsworth, in irrepressible religious rapture, calls God to witness that the houses seem asleep, Byron, lame demon as he was, flying smoke-drifted, unroofs the houses at a glance, and sees what the

¹ In this point, compare the *Curse of Minerva* with the *Tears of the Muses*.

² 'He,'—Lucifer ; (*Vision of Judgment*, 24). It is precisely because Byron was *not* his servant, that he could see the gloom. To the Devil's true servants, their Master's presence brings both cheerfulness and prosperity ;—with a delightful sense of their own wisdom and virtue ; and of the 'progress' of things in general :—in smooth sea and fair weather, —and with no need either of helm touch, or oar toil : as when once one is well within the edge of Maelstrom.

mighty cockney heart of them contains in the still lying of it, and will stir up to purpose in the waking business of it,

‘The sordor of civilisation, mixed

With all the passions which Man’s fall hath fixed.’¹

Fourthly, with this steadiness of bitter melancholy, there is joined a sense of the material beauty, both of inanimate nature, the lower animals, and human beings, which in the iridescence, colour-depth, and morbid (I use the word deliberately) mystery and softness of it,—with other qualities indescribable by any single words, and only to be analysed by extreme care,—is found, to the full, only in five men that I know of in modern times; namely Rousseau, Shelley, Byron, Turner, and myself,—differing totally and throughout the entire group of us, from the delight in clear-struck beauty of Angelico and the Trecentisti; and separated, much more singularly, from the cheerful joys of Chaucer, Shakespeare, and Scott, by its unaccountable affection for ‘Rokkes blak’ and other forms of terror and power, such as those of the ice-oceans, which to Shakespeare were only Alpine rheum; and the Via Malas and Diabolic Bridges which Dante would have condemned none but lost souls to climb, or cross;—all this love of impending mountains, coiled thunder-clouds, and dangerous sea, being joined in us with a sulky, almost ferine, love of retreat in valleys of Charmettes, gulphs of Spezzia, ravines of Olympus, low lodgings in Chelsea, and close brushwood at Coniston.

And, lastly, also in the whole group of us, glows volcanic instinct of Astræan justice returning not to, but up out of, the earth, which will not at all suffer us to rest any more in Pope’s serene ‘whatever is, is right;’ but holds, on the contrary, profound conviction that about ninety-nine hundredths of whatever at present is, is wrong: conviction making four of us,

¹ *Island*, ii. 4; perfectly orthodox theology, you observe; no denial of the fall,—nor substitution of Bacterian birth for it. Nay, nearly Evangelical theology, in contempt for the human heart; but with deeper than Evangelical humility, acknowledging also what is sordid in its civilisation.

according to our several manners, leaders of revolution for the poor, and declarers of political doctrine monstrous to the ears of mercenary mankind ; and driving the fifth, less sanguine, into mere painted-melody of lament over the fallacy of Hope and the implacableness of Fate.

In Byron the indignation, the sorrow, and the effort are joined to the death : and they are the parts of his nature (as of mine also in its feebler terms), which the selfishly comfortable public have, literally, no conception of whatever ; and from which the piously sentimental public, offering up daily the pure emotion of divine tranquillity, shrink with anathema not unembittered by alarm.

Concerning which matters I hope to speak further and with more precise illustration in my next paper ; but, seeing that this present one has been hitherto somewhat sombre, and perhaps, to gentle readers, not a little discomposing, I will conclude it with a piece of light biographic study, necessary to my plan, and as conveniently admissible in this place as afterwards ;—namely, the account of the manner in which Scott—whom we shall always find, as aforesaid, to be in salient and palpable elements of character, of the World, worldly, as Burns is of the Flesh, fleshly, and Byron of the Deuce, damnable,—spent his Sunday.

As usual, from Lockhart's farrago we cannot find out the first thing we want to know,—whether Scott worked after his week-day custom, on the Sunday morning. But, I gather, not ; at all events his household and his cattle rested (L. iii. 108). I imagine he walked out into his woods, or read quietly in his study. Immediately after breakfast, whoever was in the house, 'Ladies and gentlemen, I shall read prayers at eleven, when I expect you all to attend' (vii. 306). Question of college and other externally unanimous prayers settled for us very briefly : 'if you have no faith, have at least manners.' He read the Church of England service, lessons and all, the latter, if interesting, eloquently (*ibid.*). After the service, one of Jeremy Taylor's sermons (vi. 188). After the sermon, if the weather was fine, walk with his family, dogs included and guests, to *cold* picnic (iii. 109), followed by short extempore

biblical novelettes ; for he had his Bible, the Old Testament especially, by heart, it having been his mother's last gift to him (vi. 174). These lessons to his children in Bible history were always given, whether there was picnic or not. For the rest of the afternoon he took his pleasure in the woods with Tom Purdie, who also always appeared at his master's elbow on Sunday after dinner was over, and drank long life to the laird and his lady and all the good company, in a quaigh of whiskey or a tumbler of wine, according to his fancy (vi. 195). Whatever might happen on the other evenings of the week, Scott always dined at home on Sunday ; and with old friends : never, unless inevitably, receiving any person with whom he stood on ceremony (v. 335). He came into the room rubbing his hands like a boy arriving at home for the holidays, his Peppers and Mustards gambolling about him, 'and even the stately Maida grinning and wagging his tail with sympathy.' For the usquebaugh of the less honoured week-days, at the Sunday board he circulated the champagne briskly during dinner, and considered a pint of claret each man's fair share afterwards (v. 339). In the evening, music being to the Scottish worldly mind indecorous, he read aloud some favourite author, for the amusement or edification of his little circle. Shakespeare it might be, or Dryden,—Johnson, or Joanna Baillie,—Crabbe, or Wordsworth. But in those days 'Byron was pouring out his spirit fresh and full, and if a new piece from *his* hand had appeared, it was *sure to be read by Scott the Sunday evening afterwards* ; and that with such delighted emphasis as showed how completely the elder bard had kept up his enthusiasm for poetry at pitch of youth, and all his admiration of genius, free, pure, and unstained by the least drop of literary jealousy' (v. 341).

With such necessary and easily imaginable varieties as chanced in having Dandy Dinmont or Captain Brown for guests at Abbotsford, or Colonel Mannering, Counsellor Pleydell, and Dr. Robertson in Castle Street, such was Scott's habitual Sabbath : a day, we perceive, of eating the fat, (*dinner*, presumably not cold, being a work of necessity and mercy—thou also, even thou, Saint Thomas of Trumbull, hast

thine !) and drinking the sweet, abundant in the manner of Mr. Southey's cataract of Lodore,—‘Here it comes, sparkling.’ A day bestrewn with coronations and sops in wine ; deep in libations to good hope and fond memory ; a day of rest to beast, and mirth to man, (as also to sympathetic beasts that can be merry,) and concluding itself in an Orphic hour of delight, signifying peace on Tweedside, and goodwill to men, there or far away ;—always excepting the French, and Boney.

‘Yes, and see what it all came to in the end.’

Not so, dark-virulent Minos-Mucklewrath ; the end came of quite other things : of *these*, came such length of days and peace as Scott had in his Fatherland, and such immortality as he has in all lands.

Nathless, firm, though deeply courteous, rebuke, for his sometimes overmuch light-mindedness, was administered to him by the more grave and thoughtful Byron. For the Lord Abbot of Newstead knew his Bible by heart as well as Scott, though it had never been given him by his mother as her dearest possession. Knew it, and, what was more, had thought of it, and sought in it what Scott had never cared to think, nor been fain to seek.

And loving Scott well, and always doing him every possible pleasure in the way he sees to be most agreeable to him—as, for instance, remembering with precision, and writing down the very next morning, every blessed word that the Prince Regent had been pleased to say of him before courtly audience,—he yet conceived that such cheap ryming as his own *Bride of Abydos*, for instance, which he had written from beginning to end in four days, or even the travelling reflections of Harold and Juan on men and women, were scarcely steady enough Sunday afternoon's reading for a patriarch-Merlin like Scott. So he dedicates to him a work of a truly religious tendency, on which for his own part he has done his best,—the drama of *Cain*. Of which dedication the virtual significance to Sir Walter might be translated thus. Dearest and last of Border soothsayers, thou hast indeed told us of Black Dwarfs, and of White Maidens, also of Grey Friars, and Green Fairies ; also of sacred hollies by the well, and haunted crooks in the

glen. But of the bushes that the black dogs rend in the woods of Phlegethon ; and of the crooks in the glen, and the bickerings of the burnie where ghosts meet the mightiest of us ; and of the black misanthrope, who is by no means yet a dwarfed one, and concerning whom wiser creatures than Hobbie Elliot may tremblingly ask ‘Gude guide us, what’s yon?’ hast thou yet known, seeing that thou hast yet told, *nothing*.

Scott may perhaps have his answer. We shall in good time hear.

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THE
ELEMENTS OF DRAWING

IN

THREE LETTERS TO BEGINNERS

West Street College
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Pittsburgh, Pa.

BY

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PREFACE.

It may perhaps be thought, that in prefacing a Manual of Drawing, I ought to expatiate on the reasons why drawing should be learned; but those reasons appear to me so many and so weighty, that I cannot quickly state or enforce them. With the reader's permission, as this volume is too large already, I will waive all discussion respecting the importance of the subject, and touch only on those points which may appear questionable in the method of its treatment.

In the first place, the book is not calculated for the use of children under the age of twelve or fourteen. I do not think it advisable to engage a child in any but the most voluntary practice of art. If it has talent for drawing, it will be continually scrawling on what paper it can get; and should be allowed to scrawl at its own free will, due praise being given for every appearance of care, or truth, in its efforts. It should be allowed to amuse itself with cheap colours almost as soon as it has sense enough to wish for them. If it merely daubs the paper with shapeless stains, the colour-box may be taken away till it knows better: but as soon as it begins painting red coats on soldiers, striped flags to ships, etc., it should have colours at command; and, without restraining its choice of subject in that imaginative and historical art, of a military tendency, which children delight in, (generally quite as valuable, by the way, as any historical art delighted in by their elders,) it should be gently led by the parents to try to draw, in such childish fashion as may be, the things it can see and

likes,—birds, or butterflies, or flowers, or fruit. In later years, the indulgence of using the colour should only be granted as a reward, after it has shown care and progress in its drawings with pencil. A limited number of good and amusing prints should always be within a boy's reach : in these days of cheap illustration he can hardly possess a volume of nursery tales without good woodcuts in it, and should be encouraged to copy what he likes best of this kind ; but should be firmly restricted to a *few* prints and to a few books. If a child has many toys, it will get tired of them and break them ; if a boy has many prints he will merely dawdle and scrawl over them ; it is by the limitation of the number of his possessions that his pleasure in them is perfected, and his attention concentrated. The parents need give themselves no trouble in instructing him, as far as drawing is concerned, beyond insisting upon economical and neat habits with his colours and paper, showing him the best way of holding pencil and rule, and, so far as they take notice of his work, pointing out where a line is too short or too long, or too crooked, when compared with the copy ; *accuracy* being the first and last thing they look for. If the child shows talent for inventing or grouping figures, the parents should neither check, nor praise it. They may laugh with it frankly, or show pleasure in what it has done, just as they show pleasure in seeing it well, or cheerful ; but they must not praise it for being clever, any more than they would praise it for being stout. They should praise it only for what costs it self-denial, namely attention and hard work ; otherwise they will make it work for vanity's sake, and always badly. The best books to put into its hands are those illustrated by George Cruikshank or by Richter. (See Appendix.) At about the age of twelve or fourteen, it is quite time enough to set youth or girl to serious work ; and then this book will, I think, be useful to them ; and I have good hope it may be so, likewise, to persons of more advanced age wishing to know something of the first principles of art.

Yet observe, that the method of study recommended is not brought forward as absolutely the best, but only as the best which I can at present devise for an isolated student. It is

very likely that farther experience in teaching may enable me to modify it with advantage in several important respects ; but I am sure the main principles of it are sound, and most of the exercises as useful as they can be rendered without a master's superintendence. The method differs, however, so materially from that generally adopted by drawing-masters, that a word or two of explanation may be needed to justify what might otherwise be thought wilful eccentricity.

The manuals at present published on the subject of drawing are all directed, as far as I know, to one or other of two objects. Either they propose to give the student a power of dexterous sketching with pencil or water-colour, so as to emulate (at considerable distance) the slighter work of our second-rate artists ; or they propose to give him such accurate command of mathematical forms as may afterwards enable him to design rapidly and cheaply for manufactures. When drawing is taught as an accomplishment, the first is the aim usually proposed ; while the second is the object kept chiefly in view at Marlborough House, and in the branch Government Schools of Design.

Of the fitness of the modes of study adopted in those schools, to the end specially intended, judgment is hardly yet possible ; only, it seems to me, that we are all too much in the habit of confusing art as *applied* to manufacture, with manufacture itself. For instance, the skill by which an inventive workman designs and moulds a beautiful cup, is skill of true art ; but the skill by which that cup is copied and afterwards multiplied a thousandfold, is skill of manufacture : and the faculties which enable one workman to design and elaborate his original piece, are not to be developed by the same system of instruction as those which enable another to produce a maximum number of approximate copies of it in a given time. Farther : it is surely inexpedient that any reference to purposes of manufacture should interfere with the education of the artist himself. Try first to manufacture a Raphael ; then let Raphael direct your manufacture. He will design you a plate, or cup, or a house, or a palace, whenever you want it, and design them in the most convenient and rational way ; but do

not let your anxiety to reach the platter and the cup interfere with your education of the Raphael. Obtain first the best work you can, and the ablest hands, irrespective of any consideration of economy or facility of production. Then leave your trained artist to determine how far art can be popularised, or manufacture ennobled.

Now, I believe that (irrespective of differences in individual temper and character) the excellence of an artist, as such, depends wholly on refinement of perception, and that it is this, mainly, which a master or a school can teach; so that while powers of invention distinguish man from man, powers of perception distinguish school from school. All great schools enforce delicacy of drawing and subtlety of sight: and the only rule which I have, as yet, found to be without exception respecting art, is that all great art is delicate.

Therefore, the chief aim and bent of the following system is to obtain, first, a perfectly patient, and, to the utmost of the pupil's power, a delicate method of work, such as may ensure his seeing truly. For I am nearly convinced, that when once we see keenly enough, there is very little difficulty in drawing what we see; but, even supposing that this difficulty be still great, I believe that the sight is a more important thing than the drawing; and I would rather teach drawing that my pupils may learn to love Nature, than teach the looking at Nature that they may learn to draw. It is surely also a more important thing for young people and unprofessional students, to know how to appreciate the art of others, than to gain much power in art themselves. Now the modes of sketching ordinarily taught are inconsistent with this power of judgment. No person trained to the superficial execution of modern water-colour painting, can understand the work of Titian or Leonardo; they must for ever remain blind to the refinement of such men's pencilling, and the precision of their thinking. But, however slight a degree of manipulative power the student may reach by pursuing the mode recommended to him in these letters, I will answer for it that he cannot go once through the advised exercises without

beginning to understand what masterly work means ; and, by the time he has gained some proficiency in them, he will have a pleasure in looking at the painting of the great schools, and a new perception of the exquisiteness of natural scenery, such as would repay him for much more labour than I have asked him to undergo.

That labour is, nevertheless, sufficiently irksome, nor is it possible that it should be otherwise, so long as the pupil works unassisted by a master. For the smooth and straight road which admits unembarrassed progress must, I fear, be dull as well as smooth ; and the hedges need to be close and trim when there is no guide to warn or bring back the erring traveller. The system followed in this work will, therefore, at first, surprise somewhat sorrowfully those who are familiar with the practice of our class at the Working Men's College ; for there, the pupil, having the master at his side to extricate him from such embarrassments as his first efforts may lead into, is *at once* set to draw from a solid object, and soon finds entertainment in his efforts and interest in his difficulties. Of course the simplest object which it is possible to set before the eye is a sphere ; and practically, I find a child's toy, a white leather ball, better than anything else ; as the gradations on balls of plaster of Paris, which I use sometimes to try the strength of pupils who have had previous practice, are a little too delicate for a beginner to perceive. It has been objected that a circle, or the outline of a sphere, is one of the most difficult of all lines to draw. It is so ; but I do not want it to be drawn. All that his study of the ball is to teach the pupil, is the way in which shade gives the appearance of projection. This he learns most satisfactorily from a sphere ; because any solid form, terminated by straight lines or flat surfaces, owes some of its appearance of projection to its perspective ; but in the sphere, what, without shade, was a flat circle, becomes, merely by the added shade, the image of a solid ball ; and this fact is just as striking to the learner, whether his circular outline be true or false. He is, therefore, never allowed to trouble himself about it ; if he makes the ball look as oval as an egg, the degree of error is simply pointed out to him, and

he does better next time, and better still the next. But his mind is always fixed on the gradation of shade, and the outline left to take, in due time, care of itself. I call it outline, for the sake of immediate intelligibility,—strictly speaking, it is merely the edge of the shade; no pupil in my class being ever allowed to draw an outline, in the ordinary sense. It is pointed out to him, from the first, that Nature relieves one mass, or one tint, against another; but outlines none. The outline exercise, the second suggested in this letter, is recommended, not to enable the pupil to draw outlines, but as the only means by which, unassisted, he can test his accuracy of eye, and discipline his hand. When the master is by, errors in the form and extent of shadows can be pointed out as easily as in outline, and the handling can be gradually corrected in details of the work. But the solitary student can only find out his own mistakes by help of the traced limit, and can only test the firmness of his hand by an exercise in which nothing but firmness is required; and during which all other considerations (as of softness, complexity, &c.) are entirely excluded.

Both the system adopted at the Working Men's College, and that recommended here, agree, however, in one principle, which I consider the most important and special of all that are involved in my teaching: namely, the attaching its full importance, from the first, to local colour. I believe that the endeavour to separate, in the course of instruction, the observation of light and shade from that of local colour, has always been, and must always be, destructive of the student's power of accurate sight, and that it corrupts his taste as much as it retards his progress. I will not occupy the reader's time by any discussion of the principle here, but I wish him to note it as the only distinctive one in my system, so far as it is a system. For the recommendation to the pupil to copy faithfully, and without alteration, whatever natural object he chooses to study, is serviceable, among other reasons, just because it gets rid of systematic rules altogether, and teaches people to draw, as country lads learn to ride, without saddle or stirrups; my main object being, at first, not to get my

pupils to hold their reins prettily, but to "sit like a jack-anapes, never off."

In these written instructions, therefore, it has always been with regret that I have seen myself forced to advise anything like monotonous or formal discipline. But, to the unassisted student, such formalities are indispensable, and I am not without hope that the sense of secure advancement, and the pleasure of independent effort, may render the following out of even the more tedious exercises here proposed, possible to the solitary learner, without weariness. But if it should be otherwise, and he finds the first steps painfully irksome, I can only desire him to consider whether the acquirement of so great a power as that of pictorial expression of thought be not worth some toil; or whether it is likely, in the natural order of matters in this working world, that so great a gift should be attainable by those who will give no price for it.

One task, however, of some difficulty, the student will find I have not imposed upon him: namely, learning the laws of perspective. It would be worth while to learn them, if he could do so easily; but without a master's help, and in the way perspective is at present explained in treatises, the difficulty is greater than the gain. For perspective is not of the slightest use, except in rudimentary work. You can draw the rounding line of a table in perspective, but you cannot draw the sweep of a sea bay; you can foreshorten a log of wood by it, but you cannot foreshorten an arm. Its laws are too gross and few to be applied to any subtle form; therefore, as you must learn to draw the subtle forms by the eye, certainly you may draw the simple ones. No great painters ever trouble themselves about perspective, and very few of them know its laws; they draw everything by the eye, and, naturally enough, disdain in the easy parts of their work rules which cannot help them in difficult ones. It would take about a month's labour to draw imperfectly, by laws of perspective, what any great Venetian will draw perfectly in five minutes, when he is throwing a wreath of leaves round a head, or bending the curves of a pattern in and out among the folds of drapery. It is true that when perspective was

first discovered, everybody amused themselves with it ; and all the great painters put fine saloons and arcades behind their madonnas, merely to show that they could draw in perspective : but even this was generally done by them only to catch the public eye, and they disdained the perspective so much, that though they took the greatest pains with the circlet of a crown, or the rim of a crystal cup, in the heart of their picture, they would twist their capitals of columns and towers of churches about in the background in the most wanton way, wherever they liked the lines to go, provided only they left just perspective enough to please the public. In modern days, I doubt if any artist among us, except David Roberts, knows so much perspective as would enable him to draw a Gothic arch to scale, at a given angle and distance. Turner, though he was professor of perspective to the Royal Academy, did not know what he professed, and never, as far as I remember, drew a single building in true perspective in his life ; he drew them only with as much perspective as suited him. Prout also knew nothing of perspective, and twisted his buildings, as Turner did, into whatever shapes he liked. I do not justify this ; and would recommend the student at least to treat perspective with common civility, but to pay no court to it. The best way he can learn it, by himself, is by taking a pane of glass, fixed in a frame, so that it can be set upright before the eye, at the distance at which the proposed sketch is intended to be seen. Let the eye be placed at some fixed point, opposite the middle of the pane of glass, but as high or as low as the student likes ; then with a brush at the end of a stick, and a little body-colour that will adhere to the glass, the lines of the landscape may be traced on the glass, as you see them through it. When so traced they are all in true perspective. If the glass be sloped in any direction, the lines are still in true perspective, only it is perspective calculated for a sloping plane, while common perspective always supposes the plane of the picture to be vertical. It is good, in early practice, to accustom yourself to enclose your subject, before sketching it, with a light frame of wood held upright before you ; it will show you what you may legitimately take

into your picture, and what choice there is between a narrow foreground near you, and a wide one farther off; also, what height of tree or building you can properly take in, &c.*

Of figure drawing, nothing is said in the following pages, because I do not think figures, as chief subjects, can be drawn to any good purpose by an amateur. As accessories in landscape, they are just to be drawn on the same principles as anything else.

Lastly: If any of the directions given subsequently to the student should be found obscure by him, or if at any stage of the recommended practice he finds himself in difficulties which I have not provided enough against, he may apply by letter to Mr. Ward, who is my under drawing-master at the Working Men's College (45 Great Ormond Street), and who will give any required assistance, on the lowest terms that can remunerate him for the occupation of his time. I have not leisure myself in general to answer letters of inquiry, however much I may desire to do so; but Mr. Ward has always the power of referring any question to me when he thinks it necessary. I have good hope, however, that enough guidance is given in this work to prevent the occurrence of any serious embarrassment; and I believe that the student who obeys its directions will find, on the whole, that the best answer of questions is perseverance; and the best drawing-masters are the woods and hills.

* If the student is fond of architecture, and wishes to know more of perspective than he can learn in this rough way, Mr. Runciman (of 49 Accacia Road, St. John's Wood), who was my first drawing-master, and to whom I owe many happy hours, can teach it him quickly, easily, and rightly.

THE ELEMENTS OF DRAWING.

LETTER I.

ON FIRST PRACTICE.

MY DEAR READER :

Whether this book is to be of use to you or not, depends wholly on your reason for wishing to learn to draw. If you desire only to possess a graceful accomplishment, to be able to converse in a fluent manner about drawing, or to amuse yourself listlessly in listless hours, I cannot help you : but if you wish to learn drawing that you may be able to set down clearly, and usefully, records of such things as cannot be described in words, either to assist your own memory of them, or to convey distinct ideas of them to other people ; if you wish to obtain quicker perceptions of the beauty of the natural world, and to preserve something like a true image of beautiful things that pass away, or which you must yourself leave ; if, also, you wish to understand the minds of great painters, and to be able to appreciate their work sincerely, seeing it for yourself, and loving it, not merely taking up the thoughts of other people about it ; then I *can* help you, or, which is better, show you how to help yourself.

Only you must understand, first of all, that these powers which indeed are noble and desirable, cannot be got without work. It is much easier to learn to draw well, than it is to learn to play well on any musical instrument ; but you know that it takes three or four years of practice, giving three or

four hours a day, to acquire even ordinary command over the keys of a piano ; and you must not think that a masterly command of your pencil, and the knowledge of what may be done with it, can be acquired without painstaking, or in a *very* short time. The kind of drawing which is taught, or supposed to be taught, in our schools, in a term or two, perhaps at the rate of an hour's practice a week, is not drawing at all. It is only the performance of a few dexterous (not always even that) evolutions on paper with a black-lead pencil ; profitless alike to performer and beholder, unless as a matter of vanity, and that the smallest possible vanity. If any young person, after being taught what is, in polite circles, called "drawing," will try to copy the commonest piece of real *work*—suppose a lithograph on the titlepage of a new opera air, or a woodcut in the cheapest illustrated newspaper of the day—they will find themselves entirely beaten. And yet that common lithograph was drawn with coarse chalk, much more difficult to manage than the pencil of which an accomplished young lady is supposed to have command ; and that woodcut was drawn in urgent haste, and half spoiled in the cutting afterwards ; and both were done by people whom nobody thinks of as artists, or praises for their power ; both were done for daily bread, with no more artist's pride than any simple handicraftsmen feel in the work they live by.

Do not, therefore, think that you can learn drawing, any more than a new language, without some hard and disagreeable labour. But do not, on the other hand, if you are ready and willing to pay this price, fear that you may be unable to get on for want of special talent. It is indeed true that the persons who have peculiar talent for art, draw instinctively and get on almost without teaching ; though never without toil. It is true, also, that of inferior talent for drawing there are many degrees ; it will take one person a much longer time than another to attain the same results, and the results thus painfully attained are never quite so satisfactory as those got with greater ease when the faculties are naturally adapted to the study. But I have never yet, in the experiments I have made, met with a person who could not learn to draw at all ;

and, in general, there is a satisfactory and available power in every one to learn drawing if he wishes, just as nearly all persons have the power of learning French, Latin, or arithmetic, in a decent and useful degree, if their lot in life requires them to possess such knowledge.

Supposing then that you are ready to take a certain amount of pains, and to bear a little irksomeness and a few disappointments bravely, I can promise you that an hour's practice a day for six months, or an hour's practice every other day for twelve months, or, disposed in whatever way you find convenient, some hundred and fifty hours' practice, will give you sufficient power of drawing faithfully whatever you want to draw, and a good judgment, up to a certain point, of other people's work : of which hours, if you have one to spare at present, we may as well begin at once.

EXERCISE I.

EVERYTHING that you can see, in the world around you, presents itself to your eyes only as an arrangement of patches of different colours variously shaded.* Some of these patches of

* (N. B. This note is only for the satisfaction of incredulous or curious readers. You may miss it if you are in a hurry, or are willing to take the statement in the text on trust.)

The perception of solid Form is entirely a matter of experience. We see nothing but flat colours ; and it is only by a series of experiments that we find out that a stain of black or grey indicates the dark side of a solid substance, or that a faint hue indicates that the object in which it appears is far away. The whole technical power of painting depends on our recovery of what may be called the *innocence of the eye* ; that is to say, a sort of childish perception of these flat stains of colour, merely as such, without consciousness of what they signify, as a blind man would see them if suddenly gifted with sight.

For instance ; when grass is lighted strongly by the sun in certain directions, it is turned from green into a peculiar and somewhat dusty-looking yellow. If we had been born blind, and were suddenly endowed with sight on a piece of grass thus lighted in some parts by the sun, it would appear to us that part of the grass was green, and part a dusty yellow (very nearly of the colour of primroses) ; and, if there were primroses near, we should think that the sunlighted grass was another mass of plants of the same sulphur-yellow colour. We should try

colour have an appearance of lines or texture within them, as a piece of cloth or silk has of threads, or an animal's skin shows texture of hairs; but whether this be the case or not, the first broad aspect of the thing is that of a patch of some definite colour; and the first thing to be learned is, how to produce extents of smooth colour, without texture.

This can only be done properly with a brush; but a brush, being soft at the point, causes so much uncertainty in the touch of an unpractised hand, that it is hardly possible to learn to draw first with it, and it is better to take, in early practice, some instrument with a hard and fine point, both that we may give some support to the hand, and that by working over the subject with so delicate a point, the attention may be properly directed to all the most minute parts of it. Even

to gather some of them, and then find that the colour went away from the grass when we stood between it and the sun, but not from the primroses; and by a series of experiments we should find out that the sun was really the cause of the colour in the one,—not in the other. We go through such processes of experiment unconsciously in childhood; and having once come to conclusions touching the signification of certain colours, we always suppose that we *see* what we only know, and have hardly any consciousness of the real aspect of the signs we have learned to interpret. Very few people have any idea that sunlit grass is yellow.

Now, a highly accomplished artist has always reduced himself as nearly as possible to this condition of infantine sight. He sees the colours of nature exactly as they are, and therefore perceives at once in the sunlit grass the precise relation between the two colours that form its shade and light. To him it does not seem shade and light, but bluish green barred with gold.

Strive, therefore, first of all, to convince yourself of this great fact about sight. This, in your hand, which you know by experience and touch to be a book, is to your eye nothing but a patch of white, variously gradated and spotted; this other thing near you, which by experience you know to be a table, is to your eye only a patch of brown, variously darkened and veined; and so on: and the whole art of Painting consists merely in perceiving the shape and depth of these patches of colour, and putting patches of the same size, depth, and shape on canvas. The only obstacle to the success of painting is, that many of the real colours are brighter and paler than it is possible to put on canvas: we must put darker ones to represent them.

the best artists need occasionally to study subjects with a pointed instrument, in order thus to discipline their attention : and a beginner must be content to do so for a considerable period.

Also, observe that before we trouble ourselves about differences of colour, we must be able to lay on *one* colour properly, in whatever gradations of depth and whatever shapes we want. We will try, therefore, first to lay on tints or patches of *grey*, of whatever depth we want, with a pointed instrument. Take any finely-pointed steel pen (one of Gillott's lithographic crow-quills is best), and a piece of quite smooth, but not shining, note-paper, cream-laid, and get some ink that has stood already some time in the inkstand, so as to be quite black, and as thick as it can be without clogging the pen. Take a rule, and draw four straight lines, so as to enclose a square or nearly a square, about as large as *a*, Fig. 1. I say nearly a square, because it does not in the least matter whether it is quite square or not, the object being merely to get a space enclosed by straight lines.

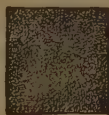


FIG. 1.

Now, try to fill in that square space with crossed lines, so completely and evenly that it shall look like a square patch of grey silk or cloth, cut out and laid on the white paper, as at *b*. Cover it quickly, first with straightish lines, in any direction you like, not troubling yourself to draw them much closer or neater than those in the square *a*. Let them quite dry before retouching them. (If you draw three or four squares side by side, you may always be going on with one while the others are drying). Then cover these lines with others in a different direction, and let those dry ; then in another direction still, and let those dry. Always wait long enough to run no risk of blotting, and then draw the lines as quickly as you can.

Each ought to be laid on as swiftly as the dash of the pen of a good writer ; but if you try to reach this great speed at first you will go over the edge of the square, which is a fault in this exercise. Yet it is better to do so now and then than to draw the lines very slowly ; for if you do, the pen leaves a little dot of ink at the end of each line, and these dots spoil your work. So draw each line quickly, stopping always as nearly as you can at the edge of the square. The ends of lines which go over the edge are afterwards to be removed with the penknife, but not till you have done the whole work, otherwise you roughen the paper, and the next line that goes over the edge makes a blot.

When you have gone over the whole three or four times, you will find some parts of the square look darker than other parts. Now try to make the lighter parts as dark as the rest, so that the whole may be of equal depth or darkness. You will find, on examining the work, that where it looks darkest the lines are closest, or there are some much darker lines, than elsewhere ; therefore you must put in other lines, or little scratches and dots, *between* the lines in the paler parts ; and where there are very conspicuous dark lines, scratch them out lightly with the penknife, for the eye must not be attracted by any line in particular. The more carefully and delicately you fill in the little gaps and holes the better ; you will get on faster by doing two or three squares perfectly than a great many badly. As the tint gets closer and begins to look even, work with very little ink in your pen, so as hardly to make any mark on the paper ; and at last, where it is too dark, use the edge of your penknife very lightly, and for some time, to wear it softly into an even tone. You will find that the greatest difficulty consists in getting evenness : one bit will always look darker than another bit of your square ; or there will be a granulated and sandy look over the whole. When you find your paper quite rough and in a mess, give it up and begin another square, but do not rest satisfied till you have done your best with every square. The tint at last ought *at least* to be as close and even as that in *b*, Fig. 1. You will find, however, that it is very difficult to get a *pale* tint ; because,

naturally, the ink lines necessary to produce a close tint at all, blacken the paper more than you want. You must get over this difficulty not so much by leaving the lines wide apart as by trying to draw them excessively fine, lightly and swiftly ; being very cautious in filling in ; and, at last, passing the pen-knife over the whole. By keeping several squares in progress at one time, and reserving your pen for the light one just when the ink is nearly exhausted, you may get on better. The paper ought, at last, to look lightly and evenly toned all over, with no lines distinctly visible.

EXERCISE II.

As this exercise in shading is very tiresome, it will be well to vary it by proceeding with another at the same time. The power of shading rightly depends mainly on *lightness* of hand and *keenness* of sight ; but there are other qualities required in drawing, dependent not merely on lightness, but steadiness of hand ; and the eye, to be perfect in its power, must be made *accurate* as well as keen, and not only see*shrewdly, but measure justly.

Possess yourself, therefore, of any cheap work on botany containing *outline* plates of leaves and flowers, it does not matter whether bad or good : "Baxter's British Flowering Plants" is quite good enough. Copy any of the simplest outlines, first with a soft pencil, following it, by the eye, as nearly as you can ; if it does not look right in proportions, rub out and correct it, always by the eye, till you think it is right : when you have got it to your mind, lay tracing-paper on the book, on this paper trace the outline you have been copying, and apply it to your own ; and having thus ascertained the faults, correct them all patiently, till you have got it as nearly accurate as may be. Work with a very soft pencil, and do not rub out so hard* as to spoil the surface of your paper ; never

* Stale crumb of bread is better, if you are making a delicate drawing, than India-rubber, for it disturbs the surface of the paper less : but it crumbles about the room and makes a mess ; and, besides, you waste the good bread, which is wrong ; and your drawing will not for a long

mind how *dirty* the paper gets, but do not roughen it; and let the false outlines alone where they do not really interfere with the true one. It is a good thing to accustom yourself to hew and shape your drawing out of a dirty piece of paper. When you have got it as right as you can, take a quill pen, not very fine at the point; rest your hand on a book about an inch and a half thick, so as to hold the pen long; and go over your pencil outline with ink, raising your pen point as seldom as possible, and never leaning more heavily on one part of the line than on another. In most outline drawings of the present day, parts of the curves are thickened to give an effect of shade; all such outlines are bad, but they will serve well enough for your exercises, provided you do not imitate this character: it is better, however, if you can, to choose a book of pure outlines. It does not in the least matter whether your pen outline be thin or thick; but it matters greatly that it should be *equal*, not heavier in one place than in another. The power to be obtained is that of drawing an even line slowly and in any direction; all *dashing* lines, or approximations to penmanship, are bad. The pen should, as it were, walk slowly over the ground, and you should be able at any moment to stop it, or to turn it in any other direction, like a well-managed horse.

As soon as you can copy every curve *slowly* and accurately, you have made satisfactory progress; but you will find the difficulty is in the *slowness*. It is easy to draw what appears to be a good line with a sweep of the hand, or with what is called freedom;* the real difficulty and masterliness is in

while be worth the crumbs. So use India-rubber very lightly; or, if heavily pressing it only, not passing it over the paper, and leave what pencil marks that will not come away so, without minding them. In a finished drawing the uneffaced pencilling is often serviceable, helping the general tone, and enabling you to take out little bright lights.

* What is usually so much sought after under the term "freedom" is the character of the drawing of a great master in a hurry, whose hand is so thoroughly disciplined, that when pressed for time he can let it fly as it will, and it will not go far wrong. But the hand of a great master at real *work* is *never* free: its swiftest dash is under perfect government. Paul Veronese or Tintoret could pause within a hair's breadth of any

never letting the hand *be* free, but keeping it under entire control at every part of the line.

EXERCISE III.

MEANTIME, you are always to be going on with your shaded squares, and chiefly with these, the outline exercises being taken up only for rest.

As soon as you find you have some command of the pen as a shading instrument, and can lay a pale or dark tint as you choose, try to produce gradated spaces like Fig. 2., the dark



FIG. 2.

tint passing gradually into the lighter ones. Nearly *all* expression of form, in drawing, depends on your power of gradating delicately; and the gradation is always most skilful which passes from one tint into another *very little* paler. Draw, therefore, two parallel lines for limits to your work, as in Fig. 2., and try to gradate the shade evenly from white to black, passing over the greatest possible distance, yet so that every

appointed mark, in their fastest touches; and follow, within a hair's breadth, the previously intended curve. You must never, therefore, aim at freedom. It is not required of your drawing that it should be free, but that it should be *right*: in time you will be able to do right easily, and then your work will be free in the best sense; but there is no merit in doing *wrong* easily.

These remarks, however, do not apply to the lines used in shading, which, it will be remembered, are to be made as *quickly* as possible. The reason of this is, that the quicker a line is drawn, the lighter it is at the ends, and therefore the more easily joined with other lines, and concealed by them; the object in perfect shading being to conceal the lines as much as possible.

And observe, in this exercise, the object is more to get firmness of hand than accuracy of eye for outline; for there are no outlines in Nature, and the ordinary student is sure to draw them falsely if he draws them at all. Do not, therefore, be discouraged if you find mistakes continue to occur in your outlines; be content at present if you find your hand gaining command over the curves.

part of the band may have visible change in it. The perception of gradation is very deficient in all beginners (not to say, in many artists), and you will probably, for some time, think your gradation skilful enough when it is quite patchy and imperfect. By getting a piece of grey shaded riband, and comparing it with your drawing, you may arrive, in early stages of your work, at a wholesome dissatisfaction with it. Widen your band little by little as you get more skilful, so as to give the gradation more lateral space, and accustom yourself at the same time to look for graduated spaces in Nature. The sky is the largest and the most beautiful; watch it at twilight, after the sun is down, and try to consider each pane of glass in the window you look through as a piece of paper coloured blue, or grey, or purple, as it happens to be, and observe how quietly and continuously the gradation extends over the space in the window, of one or two feet square. Observe the shades on the outside and inside of a common white cup or bowl, which make it look round and hollow;* and then on folds of white drapery; and thus gradually you will be led to observe the more subtle transitions of the light as it increases or declines on flat surfaces. At last, when your eye gets keen and true, you will see gradation on everything in Nature.

But it will not be in your power yet awhile to draw from any objects in which the gradations are varied and complicated; nor will it be a bad omen for your future progress, and for the use that art is to be made of by you, if the first thing at which you aim should be a little bit of sky. So take any narrow space of evening sky, that you can usually see, between the boughs of a tree, or between two chimneys, or through the corner of a pane in the window you like best to sit at, and try to gradate a little space of white paper as evenly as that is graduated—as *tenderly* you cannot gradate it without colour, no, nor with colour either; but you may do it as evenly; or, if you get impatient with your spots and lines of ink, when you look at the beauty of the sky, the sense you will have gained of that beauty is something to be thankful for. But

* If you can get any pieces of *dead* white porcelain, not glazed, they will be useful models.

you ought not to be impatient with your pen and ink ; for all great painters, however delicate their perception of colour, are fond of the peculiar effect of light which may be got in a pen-and-ink sketch, and in a woodcut, by the gleaming of the white paper between the black lines ; and if you cannot gradate well with pure black lines, you will never gradate well with pale ones. By looking at any common woodcuts, in the cheap publications of the day, you may see how gradation is given to the sky by leaving the lines farther and farther apart ; but you must make your lines as *fine* as you can, as well as far apart, towards the light ; and do not try to make them long or straight, but let them cross irregularly in any direction easy to your hand, depending on nothing but their gradation for your effect. On this point of direction of lines, however, I shall have to tell you more presently ; in the meantime, do not trouble yourself about it.

EXERCISE IV.

As soon as you find you can gradate tolerably with the pen, take an H. or HH. pencil, using its point to produce shade, from the darkest possible to the palest, in exactly the same manner as the pen, lightening, however, now with India-rubber instead of the penknife. You will find that all *pale* tints of shade are thus easily producible with great precision and tenderness, but that you cannot get the same dark power as with the pen and ink, and that the surface of the shade is apt to become glossy and metallic, or dirty-looking, or sandy. Persevere, however, in trying to bring it to evenness with the fine point, removing any single speck or line that may be too black, with the *point* of the knife : you must not scratch the whole with the knife as you do the ink. If you find the texture very speckled-looking, lighten it all over with India-rubber, and recover it again with sharp, and excessively fine touches of the pencil point, bringing the parts that are too pale to perfect evenness with the darker spots.

You cannot use the point too delicately or cunningly in doing this ; work with it as if you were drawing the down on a butterfly's wing.

At this stage of your progress, if not before, you may be assured that some clever friend will come in, and hold up his hands in mocking amazement, and ask you who could set you to that "niggling;" and if you persevere in it, you will have to sustain considerable persecution from your artistical acquaintances generally, who will tell you that all good drawing depends on "boldness." But never mind them. You do not hear them tell a child, beginning music, to lay its little hand with a crash among the keys, in imitation of the great masters; yet they might, as reasonably as they may tell you to be bold in the present state of your knowledge. Bold, in the sense of being undaunted, yes; but bold in the sense of being careless, confident, or exhibitory,—no,—no, and a thousand times no; for, even if you were not a beginner, it would be bad advice that made you bold. Mischief may easily be done quickly, but good and beautiful work is generally done slowly; you will find no boldness in the way a flower or a bird's wing is painted; and if Nature is not bold at *her* work, do you think you ought to be at *yours*? So never mind what people say, but work with your pencil point very patiently; and if you can trust me in anything, trust me when I tell you, that though there are all kinds and ways of art,—large work for large places, small work for narrow places, slow work for people who can wait, and quick work for people who cannot,—there is one quality, and, I think, only one, in which all great and good art agrees;—it is all *delicate* art. Coarse art is always bad art. You cannot understand this at present, because you do not know yet how much tender thought, and subtle care, the great painters put into touches that at first look coarse; but, believe me, it is true, and you will find it is so in due time.

You will be perhaps also troubled, in these first essays at pencil drawing, by noticing that more delicate gradations are got in an instant by a chance touch of the India-rubber, than by an hour's labour with the point; and you may wonder why I tell you to produce tints so painfully, which might, it appears, be obtained with ease. But there are two reasons: the first, that when you come to draw forms, you must be

able to gradate with absolute precision, in whatever place and direction you wish ; not in any wise vaguely, as the India rubber does it ; and, secondly, that all natural shadows are more or less mingled with gleams of light. In the darkness of ground there is the light of the little pebbles or dust ; in the darkness of foliage, the glitter of the leaves ; in the darkness of flesh, transparency ; in that of a stone, granulation : in every case there is some mingling of light, which cannot be represented by the leaden tone which you get by rubbing, or by an instrument known to artists as the “stump.” When you can manage the point properly, you will indeed be able to do much also with this instrument, or with your fingers ; but then you will have to retouch the flat tints afterwards, so as to put life and light into them, and that can only be done with the point. Labour on, therefore, courageously, with that only.

EXERCISE V.

WHEN you can manage to tint and gradate tenderly with the pencil point, get a good large alphabet, and try to *tint* the letters into shape with the pencil point. Do not outline them first, but measure their height and extreme breadth with the

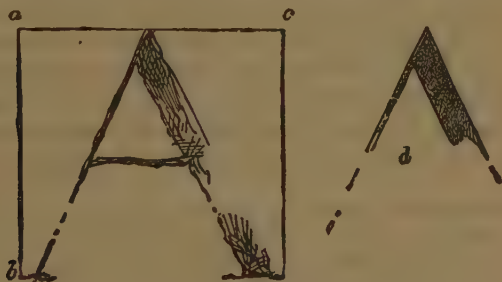


FIG. 3.

compasses, as *a b*, *a c*, Fig. 3., and then scratch in their shapes gradually ; the letter A, enclosed within the lines, being in what Turner would have called a “state of forwardness.” Then, when you are satisfied with the shape of the letter, draw pen and ink lines firmly round the tint, as at *d*, and re-

move any touches outside the limit, first with the India-rubber, and then with the penknife, so that all may look clear and right. If you rub out any of the pencil inside the outline of the letter, retouch it, closing it up to the inked line. The straight lines of the outline are all to be *ruled*,* but the curved lines are to be drawn by the eye and hand; and you will soon find what good practice there is in getting the curved letters, such as Bs, Cs, &c., to stand quite straight, and come into accurate form.

All these exercises are very irksome, and they are not to be persisted in alone; neither is it necessary to acquire perfect power in any of them. An entire master of the pencil or brush ought, indeed, to be able to draw any form at once, as Giotto his circle; but such skill as this is only to be expected of the consummate master, having pencil in hand all his life, and all day long, hence the force of Giotto's proof of his skill; and it is quite possible to draw very beautifully, without attaining even an approximation to such a power; the main point being, not that every line should be precisely what we intend or wish, but that the line which we intended or wished to draw should be right. If we always see rightly and mean rightly, we shall get on, though the hand may stagger a little; but if we mean wrongly, or mean nothing, it does not matter how firm the hand is. Do not, therefore, torment yourself because you cannot do as well as you would like; but work patiently, sure that every square and letter will give you a certain increase of power; and as soon as you can draw your letters pretty well, here is a more amusing exercise for you.

* Artists who glance at this book may be surprised at this permission. My chief reason is, that I think it more necessary that the pupil's eye should be trained to accurate perception of the relations of curve and right lines, by having the latter absolutely true, than that he should practice drawing straight lines. But also, I believe, though I am not quite sure of this, that he never *ought* to be able to draw a straight line. I do not believe a perfectly trained hand ever can draw a line without some curvature in it, or some variety of direction. Prout could draw a straight line, but I do not believe Raphael could, nor Tintoret. A great draughtsman can, as far as I have observed, draw every line *but* a straight one.

EXERCISE VI.

CHOOSE any tree that you think pretty, which is nearly bare of leaves, and which you can see against the sky, or against a pale wall, or other light ground : it must not be against strong light, or you will find the looking at it hurts your eyes ; nor must it be in sunshine, or you will be puzzled by the lights on the boughs. But the tree must be in shade ; and the sky blue, or grey, or dull white. A wholly grey or rainy day is the best for this practice.

You will see that *all* the boughs of the tree are *dark* against the sky. Consider them as so many dark rivers, to be laid down in a map with absolute accuracy ; and, without the least thought about the *roundness* of the stems, map them all out in flat shade, scrawling them in with pencil, just as you did the limbs of your letters ; then correct and alter them, rubbing out and out again, never minding how much your paper is dirtied (only not destroying its surface), until every bough is exactly, or as near as your utmost power can bring it, right in curvature and in thickness. Look at the white interstices between them with as much scrupulousness as if they were little estates which you had to survey, and draw maps of, for some important lawsuit, involving heavy penalties if you cut the least bit of a corner off any of them, or gave the hedge anywhere too deep a curve ; and try continually to fancy the whole tree nothing but a flat ramification on a white ground. Do not take any trouble about the little twigs, which look like a confused network or mist ; leave them all out,* drawing only the main branches as far as you can see them distinctly, your object at present being not to draw a tree, but to *learn how to do so*. When you have got the thing as nearly right as you can—and it is better to make one good study than twenty left unnecessarily inaccurate—take your pen, and put a fine outline to all the boughs, as you did to your letter, taking

* Or, if you feel able to do so, scratch them in with confused quick touches, indicating the general shape of the cloud or mist of twigs round the main branches ; but do not take much trouble about them.

care, as far as possible, to put the outline within the edge of the shade, so as not to make the boughs thicker: the main use of the outline is to *affirm* the whole more clearly; to do away with little accidental roughnesses and excrescences, and especially to mark where boughs cross, or come in front of each other, as at such points their arrangement in this kind of sketch is unintelligible without the outline. It may perfectly well happen that in Nature it should be less distinct



FIG. 4.

than your outline will make it; but it is better in this kind of sketch to mark the facts clearly. The temptation is always to be slovenly and careless, and the outline is like a bridle, and forces our indolence into attention and precision. The outline should be about the thickness of that in Fig. 4., which represents the ramification of a small stone pine, only I have not endeavoured to represent the pencil shading within the outline, as I could not easily express it in a woodcut; and you have nothing to do at present with the indication of the foliage above, of which in another place. You may also draw

your trees as much larger than this figure as you like ; only, however large they may be, keep the outline as delicate, and draw the branches far enough into their outer sprays to give quite as slender ramification as you have in this figure, otherwise you do not get good enough practice out of them.

You cannot do too many studies of this kind : every one will give you some new notion about trees : but when you are tired of tree boughs, take any forms whatever which are drawn in flat colour, one upon another ; as patterns on any kind of cloth, or flat china (tiles, for instance), executed in two colours only ; and practice drawing them of the right shape and size by the eye, and filling them in with shade of the depth required.

In doing this, you will first have to meet the difficulty of representing depth of colour by depth of shade. Thus a pattern of ultramarine blue will have to be represented by a darker tint of grey than a pattern of yellow.

And now it is both time for you to begin to learn the mechanical use of the brush, and necessary for you to do so in order to provide yourself with the graduated scale of colour which you will want. If you can, by any means, get acquainted with any ordinarily skilful water-colour painter, and prevail on him to show you how to lay on tints with a brush, by all means do so ; not that you are yet, nor for a long while yet, to begin to colour, but because the brush is often more convenient than the pencil for laying on masses or tints of shade, and the sooner you know how to manage it as an instrument the better. If, however, you have no opportunity of seeing how water-colour is laid on by a workman of any kind, the following directions will help you :—

EXERCISE VII.

GET a shilling cake of Prussian blue. Dip the end of it in water so as to take up a drop, and rub it in a white saucer till you cannot rub much more, and the colour gets dark, thick, and oily-looking. Put two teaspoonfuls of water to the colour you have rubbed down, and mix it well up with a camel's-hair brush about three quarters of an inch long.

Then take a piece of smooth, but not glossy, Bristol board or pasteboard ; divide it, with your pencil and rule, into squares as large as those of the very largest chess-board : they need not be perfect squares, only as nearly so as you can quickly guess. Rest the pasteboard on something sloping as much as an ordinary desk ; then, dipping your brush into the colour you have mixed, and taking up as much of the liquid as it will carry, begin at the top of one of the squares, and lay a pond or runlet of colour along the top edge. Lead this pond of colour gradually downwards, not faster at one place than another, but as if you were adding a row of bricks to a building, all along (only building down instead of up), dipping the brush frequently so as to keep the colour as full in that, and in as great quantity on the paper, as you can, so only that it does not run down anywhere in a little stream. But if it should, never mind ; go on quietly with your square till you have covered it all in. When you get to the bottom, the colour will lodge there in a great wave. Have ready a piece of blotting-paper ; dry your brush on it, and with the dry brush take up the superfluous colour as you would with a sponge, till it all looks even.

In leading the colour down, you will find your brush continually go over the edge of the square, or leave little gaps within it. Do not endeavour to retouch these, nor take much care about them ; the great thing is to get the colour to lie smoothly where it reaches, not in alternate blots and pale patches ; try, therefore, to lead it over the square as fast as possible, with such attention to your limit as you are able to give. The use of the exercise is, indeed, to enable you finally to strike the colour up to the limit with perfect accuracy ; but the first thing is to get it even, the power of rightly striking the edge comes only by time and practice ; even the greatest artists rarely can do this quite perfectly.

When you have done one square, proceed to do another which does not communicate with it. When you have thus done all the alternate squares, as on a chess-board, turn the pasteboard upside down, begin again with the first, and put another coat over it, and so on over all the others. The use

of turning the paper upside down is to neutralise the increase of darkness towards the bottom of the squares, which would otherwise take place from the ponding of the colour.

Be resolved to use blotting-paper, or a piece of rag, instead of your lips, to dry the brush. The habit of doing so, once acquired, will save you from much partial poisoning. Take care, however, always to draw the brush from root to point, otherwise you will spoil it. You may even wipe it as you would a pen when you want it very dry, without doing harm, provided you do not crush it upwards. Get a good brush at first, and cherish it ; it will serve you longer and better than many bad ones.

When you have done the squares all over again, do them a third time, always trying to keep your edges as neat as possible. When your colour is exhausted, mix more in the same proportions, two teaspoonfuls to as much as you can grind with a drop ; and when you have done the alternate squares three times over, as the paper will be getting very damp, and dry more slowly, begin on the white squares, and bring them up to the same tint in the same way. The amount of jagged dark line which then will mark the limits of the squares will be the exact measure of your unskilfulness.

As soon as you tire of squares draw circles (with compasses) ; and then draw straight lines irregularly across circles, and fill up the spaces so produced between the straight line and the circumference ; and then draw any simple shapes of leaves, according to the exercise No. 2., and fill up those, until you can lay on colour quite evenly in any shape you want.

You will find in the course of this practice, as you cannot always put exactly the same quantity of water to the colour, that the darker the colour is, the more difficult it becomes to lay it on evenly. Therefore, when you have gained some definite degree of power, try to fill in the forms required with a full brush, and a dark tint, at once, instead of laying several coats one over another ; always taking care that the tint, however dark, be quite liquid ; and that, after being laid on, so much of it is absorbed as to prevent its forming a black line

at the edge as it dries. A little experience will teach you how apt the colour is to do this, and how to prevent it ; not that it needs always to be prevented, for a great master in water-colours will sometimes draw a firm outline, when he *wants* one, simply by letting the colour dry in this way at the edge.

When, however, you begin to cover complicated forms with the darker colour, no rapidity will prevent the tint from drying irregularly as it is led on from part to part. You will then find the following method useful. Lay in the colour very pale and liquid ; so pale, indeed, that you can only just see where it is on the paper. Lead it up to all the outlines, and make it precise in form, keeping it thoroughly wet everywhere. Then, when it is all in shape, take the darker colour, and lay some of it *into* the middle of the liquid colour. It will spread gradually in a branchy kind of way, and you may now lead it up to the outlines already determined, and play it with the brush till it fills its place well ; then let it dry, and it will be as flat and pure as a single dash, yet defining all the complicated forms accurately.

Having thus obtained the power of laying on a tolerably flat tint, you must try to lay on a gradated one. Prepare the colour with three or four teaspoonfuls of water ; then, when it is mixed, pour away about two-thirds of it, keeping a teaspoonful of pale colour. Sloping your paper as before, draw two pencil lines all the way down, leaving a space between them of the width of a square on your chess-board. Begin at the top of your paper, between the lines ; and having struck on the first brushful of colour, and led it down a little, dip your brush deep in water, and mix up the colour on the plate quickly with as much more water as the brush takes up at that one dip : then, with this paler colour, lead the tint farther down. Dip in water again, mix the colour again, and thus lead down the tint, always dipping in water once between each replenishing of the brush, and stirring the colour on the plate well, but as quickly as you can. Go on until the colour has become so pale that you cannot see it ; then wash your brush thoroughly in water, and carry the wave down a little

farther with that, and then absorb it with the dry brush, and leave it to dry.

If you get to the bottom of your paper before your colour gets pale, you may either take longer paper, or begin, with the tint as it was when you left off, on another sheet ; but be sure to exhaust it to pure whiteness at last. When all is quite dry, recommence at the top with another similar mixture of colour, and go down in the same way. Then again, and then again, and so continually until the colour at the top of the paper is as dark as your cake of Prussian blue, and passes down into pure white paper at the end of your column, with a perfectly smooth gradation from one into the other.

You will find at first that the paper gets mottled or wavy, instead of evenly gradated ; this is because at some places you have taken up more water in your brush than at others, or not mixed it thoroughly on the plate, or led one tint too far before replenishing with the next. Practice only will enable you to do it well ; the best artists cannot always get gradations of this kind quite to their minds ; nor do they ever leave them on their pictures without after touching.

As you get more power, and can strike the colour more quickly down, you will be able to gradate in less compass ; * beginning with a small quantity of colour, and adding a drop of water, instead of a brushful ; with finer brushes, also, you may gradate to a less scale. But slight skill will enable you to test the relations of colour to shade as far as is necessary for your immediate progress, which is to be done thus :—

Take cakes of lake, of gamboge, of sepia, of blue-black, of cobalt, and vermilion ; and prepare gradated columns (exactly as you have done with the Prussian blue) of the lake and blue-black.† Cut a narrow slip all the way down, of each gradated colour, and set the three slips side by side ; fasten them down, and rule lines at equal distances across all the three, so as to divide them into fifty degrees, and number the degrees

* It is more difficult, at first, to get, in colour, a narrow gradation than an extended one ; but the ultimate-difficulty is, as with the pen, to make the gradation go *far*.

† Of course, all the columns of colour are to be of equal length.

of each, from light to dark, 1, 2, 3, &c. If you have gradated them rightly, the darkest part either of the red or blue will be nearly equal in power to the darkest part of the blue-black, and any degree of the black slip will also, accurately enough for our purpose, balance in weight the degree similarly numbered in the red or the blue slip. Then, when you are drawing from objects of a crimson or blue colour, if you can match their colour by any compartment of the crimson or blue in your scales, the grey in the compartment of the grey scale marked with the same number is the grey which must represent that crimson or blue in your light and shade drawing.

Next, prepare scales with gamboge, cobalt, and vermilion. You will find that you cannot darken these beyond a certain point ; * for yellow and scarlet, so long as they remain yellow and scarlet, cannot approach to black ; we cannot have, properly speaking, a dark yellow or dark scarlet. Make your scales of full yellow, blue, and scarlet, half-way down ; passing *then* gradually to white. Afterwards use lake to darken the upper half of the vermilion and gamboge ; and Prussian blue to darken the cobalt. You will thus have three more scales, passing from white nearly to black, through yellow and orange, through sky-blue, and through scarlet. By mixing the gamboge and Prussian blue you may make another with green ; mixing the cobalt and lake, another with violet ; the sepia alone will make a forcible brown one ; and so on, until you have as many scales as you like, passing from black to white through different colours. Then, supposing your scales properly gradated and equally divided, the compartment or degree No. 1. of the grey will represent in chiaroscuro the No. 1. of all the other colours ; No. 2. of grey the No. 2. of the other colours, and so on.

It is only necessary, however, in this matter that you should understand the principle ; for it would never be possible for you to grade your scales so truly as to make them practically accurate and serviceable ; and even if you could, unless you had about ten thousand scales, and were able to change

* The degree of darkness you can reach with the given colour is always indicated by the colour of the solid cake in the box.

them faster than ever juggler changed cards, you could not in a day measure the tints on so much as one side of a frost-bitten apple : but when once you fully understand the principle, and see how all colours contain as it were a certain quantity of darkness, or power of dark relief from white—some more, some less ; and how this pitch or power of each may be represented by equivalent values of grey, you will soon be able to arrive shrewdly at an approximation by a glance of the eye, without any measuring scale at all.

You must now go on, again with the pen, drawing patterns, and any shapes of shade that you think pretty, as veinings in marble, or tortoiseshell, spots in surfaces of shells, &c., as tenderly as you can, in the darknesses that correspond to their colours ; and when you find you can do this successfully, it is time to begin rounding.

EXERCISE VIII.

Go out into your garden, or into the road, and pick up the first round or oval stone you can find, not very white, nor very dark ; and the smoother it is the better, only it must not *shine*. Draw your table near the window, and put the stone, which I will suppose is about the size of *a* in Fig. 5. (it had better not be much larger), on a piece of not very white paper, on the table in front of you. Sit so that the light may come from your left, else the shadow of the pencil point interferes with your sight of your work. You must not let the *sun* fall on the stone, but only ordinary light : therefore choose a window which the sun does not come in at. If you can shut the shutters of the other windows in the room it will be all the better ; but this is not of much consequence.

Now, if you can draw that stone, you can draw anything : I mean, anything that is drawable. Many things (sea foam, for instance) cannot be drawn at all, only the idea of them more or less suggested ; but if you can draw the stone *rightly*, every thing within reach of art is also within yours.

For all drawing depends, primarily, on your power of representing *Roundness*. If you can once do that, all the rest is easy and straightforward ; if you cannot do that, nothing

else that you may be able to do will be of any use. For Nature is all made up of roundnesses ; not the roundness of perfect globes, but of variously curved surfaces. Boughs are rounded, leaves are rounded, stones are rounded, clouds are rounded, cheeks are rounded, and curls are rounded : there is no more flatness in the natural world than there is vacancy. The world itself is round, and so is all that is in it, more or less, except human work, which is often very flat indeed.

Therefore, set yourself steadily to conquer that round stone, and you have won the battle.

Look your stone antagonist boldly in the face. You will see that the side of it next the window is lighter than most of the paper : that the side of it farthest from the window is darker than the paper ; and that the light passes into the dark gradually, while a shadow is thrown to the right *on* the paper itself by the stone : the general appearance of things being more or less as in *a*, Fig. 5., the spots on the stone excepted, of which more presently.

Now, remember always what was stated in the outset, that every thing you can see in Nature is seen only so far as it is lighter or darker than the things about it, or of a different colour from them. It is either seen as a patch of one colour on a ground of another ; or as a pale thing relieved from a dark thing, or a dark thing from a pale thing. And if you can put on patches of colour or shade of exactly the same size, shape, and gradations as those on the object and its ground, you will produce the appearance of the object and its ground. The best draughtsman—Titian and Paul Veronese themselves—could do no more than this ; and you will soon be able to get some power of doing it in an inferior way, if you once understand the exceeding simplicity of what is to be done. Suppose you have a brown book on a white sheet of paper, on a red tablecloth. You have nothing to do but to put on spaces of red, white, and brown, in the same shape, and gradated from dark to light in the same degrees, and your drawing is done. If you will not look at what you see, if you try to put on brighter or duller colours than are there, if you try to put them on with a dash or a blot, or to cover

your paper with "vigorous" lines, or to produce anything, in fact, but the plain, unaffected, and finished tranquillity of the thing before you, you need not hope to get on. Nature will show you nothing if you set yourself up for her master. But forget yourself, and try to obey *her*, and you will find obedience easier and happier than you think.

The real difficulties are to get the *refinement* of the forms and the *evenness* of the gradations. You may depend upon it, when you are dissatisfied with your work, it is always too coarse or too uneven. It may not be wrong—in all probability is not wrong, in any (so-called) *great* point. But its edges are not true enough in outline; and its shades are in blotches, or scratches, or full of white holes. Get it more tender and more true, and you will find it is more powerful.

Do not, therefore, think your drawing must be weak because you have a finely pointed pen in your hand. Till you can draw with that, you can draw with nothing; when you can draw with that, you can draw with a log of wood charred at the end. True boldness and power are only to be gained by care. Even in fencing and dancing, all ultimate ease depends on early precision in the commencement; much more in singing or drawing.



FIG. 2.

Now, I do not want you to copy Fig. 5., but to copy the stone before you in the way that Fig. 5. is done. To which end, first measure the extreme length of the stone with compasses, and mark that length on your paper ; then, between the points marked, leave something like the form of the stone in light, scrawling the paper all over, round it, as at *b*, Fig. 5. You cannot rightly see what the form of the stone really is till you begin finishing, so sketch it in quite rudely ; only rather leave too *much* room for the high light, than too little : and then more cautiously fill in the shade, shutting the light gradually up, and putting in the dark cautiously on the dark side. You need not plague yourself about accuracy of shape, because, till you have practised a great deal, it is impossible for you to draw that shape quite truly, and you must gradually gain correctness by means of these various exercises : what you have mainly to do at present is, to get the stone to look solid and round, not much minding what its exact contour is—only draw it as nearly right as you can without vexation ; and you will get it *more* right by thus feeling your way to it in shade, than if you tried to draw the outline at first. For you can *see* no outline ; what you see is only a certain space of gradated shade, with other such spaces about it ; and those pieces of shade you are to imitate as nearly as you can, by scrawling the paper over till you get them to the right shape, with the same gradations which they have in Nature. And this is really more likely to be done well, if you have to fight your way through a little confusion in the sketch, than if you have an accurately traced outline. For instance, I was going to draw, beside *a*, another effect on the stone ; reflected light bringing its dark side out from the background : but when I had laid on the first few touches, I thought it would be better to stop, and let you see how I had begun it, at *b*. In which beginning it will be observed that nothing is so determined but that I can more or less modify, and add to or diminish the contour as I work on, the lines which suggest the outline being blended with the others if I do not want them ; and the having to fill up the vacancies and conquer the irregularities of such a sketch, will probably secure a higher

completion at last, than if half an hour had been spent in getting a true outline before beginning.

In doing this, however, take care not to get the drawing too dark. In order to ascertain what the shades of it really are, cut a round hole, about half the size of a pea, in a piece of white paper, the colour of that you use to draw on. Hold this bit of paper, with the hole in it, between you and your stone; and pass the paper backwards and forwards, so as to see the different portions of the stone (or other subject) through the hole. You will find that, thus, the circular hole looks like one of the patches of colour you have been accustomed to match, only changing in depth as it lets different pieces of the stone be seen through it. You will be able thus actually to *match* the colour of the stone, at any part of it, by tinting the paper beside the circular opening. And you will find that this opening never looks quite *black*, but that all the roundings of the stone are given by subdued greys.*

You will probably find, also, that some parts of the stone, or of the paper it lies on, look luminous through the opening, so that the little circle then tells as a light spot instead of a dark spot. When this is so, you cannot imitate it, for you have no means of getting light brighter than white paper: but by holding the paper more sloped towards the light, you will find that many parts of the stone, which before looked light through the hole, then look dark through it; and if you can place the paper in such a position that every part of the stone looks slightly dark, the little hole will tell always as a spot of shade, and if your drawing is put in the same light, you can imitate or match every gradation. You will be amazed to find, under these circumstances, how slight the differences of tint are, by which, through infinite delicacy of gradation, Nature can express form.

If any part of your subject will obstinately show itself as a light through the hole, that part you need not hope to imitate. Leave it white, you can do no more.

When you have done the best you can to get the general

* The figure *a*, Fig. 5., is very dark, but this is to give an example of all kinds of depth of tint, without repeated figures.

form, proceed to finish, by imitating the texture and all the cracks and stains of the stone as closely as you can ; and note, in doing this, that cracks or fissures of any kind, whether between stones in walls, or in the grain of timber or rocks, or in any of the thousand other conditions they present, are never expressible by single black lines, or lines of simple shadow. A crack must always have its complete system of light and shade, however small its scale. It is in reality a little *ravine*, with a dark or shady side, and light or sunny side, and, usually, shadow in the bottom. This is one of the instances in which it may be as well to understand the reason of the appearance ; it is not often so in drawing, for the aspects of things are so subtle and confused that they cannot in general be explained ; and in the endeavour to explain some, we are sure to lose sight of others, while the natural overestimate of the importance of those on which the attention is fixed, causes us to exaggerate them, so that merely *scientific* draughtsmen caricature a third part of Nature, and miss two-thirds. The best scholar is he whose eye is so keen as to see at once how the thing looks, and who need not, therefore, trouble himself with any reasons why it looks so : but few people have this acuteness of perception ; and to those who are destitute of it, a little pointing out of rule and reason will be a help, especially when a master is not near them. I never allow my own pupils to ask the reason of anything, because, as I watch their work, I can always show them how the thing is, and what appearance they are missing in it ; but when a master is not by to direct the sight, science may, here and there, be allowed to do so in his stead.

Generally, then, every solid illumined object—for instance, the stone you are drawing—has a light side turned towards the light, a dark side turned away from the light, and a shadow, which is cast on something else (as by the stone on the paper it is set upon). You may sometimes be placed so as to see only the light side and shadow, and sometimes only the dark side and shadow, and sometimes both, or either, without the shadow ; but in most positions solid objects will show all the three, as the stone does here.

Hold up your hand with the edge of it towards you, as you sit now with your side to the window, so that the flat of your hand is turned to the window. You will see one side of your hand distinctly lighted, the other distinctly in shade. Here are light side and dark side, with no seen shadow ; the shadow being detached, perhaps on the table, perhaps on the other side of the room ; you need not look for it at present.

Take a sheet of note-paper, and holding it edgeways, as you hold your hand, wave it up and down past the side of your hand which is turned from the light, the paper being, of course, farther from the window. You will see, as it passes a strong gleam of light strike on your hand, and light it considerably on its dark side. This light is *reflected* light. It is thrown back from the paper (on which it strikes first in coming from the window) to the surface of your hand, just as a ball would be if somebody threw it through the window at the wall and you caught it at the rebound.

Next, instead of the note-paper, take a red book, or a piece of scarlet cloth. You will see that the gleam of light falling on your hand, as you wave the book is now reddened. Take a blue book, and you will find the gleam is blue. Thus every object will cast some of its own colour back in the light that it reflects.

Now it is not only these books or papers that reflect light to your hand : every object in the room, on that side of it, reflects some, but more feebly, and the colours mixing all together form a neutral* light, which lets the colour of your hand itself be more distinctly seen than that of any object which reflects light to it ; but if there were no reflected light, that side of your hand would look as black as a coal.

Objects are seen, therefore in general, partly by direct light, and partly by light reflected from the objects around them, or from the atmosphere and clouds. The colour of their light sides depends much on that of the direct light, and that of the dark sides on the colours of the objects near them. It is

* Nearly neutral in ordinary circumstances, but yet with quite different tones in its neutrality, according to the colours of the various reflected rays that compose it.

therefore impossible to say beforehand what colour an object will have at any point of its surface, that colour depending partly on its own tint, and partly on infinite combinations of rays reflected from other things. The only certain fact about dark sides is, that their colour will be changeful, and that a picture which gives them merely darker shades of the colour of the light sides must assuredly be bad.

Now, lay your hand flat on the white paper you are drawing on. You will see one side of each finger lighted, one side dark, and the shadow of your hand on the paper. Here, therefore, are the three divisions of shade seen at once. And although the paper is white, and your hand of a rosy colour somewhat darker than white, yet you will see that the shadow all along, just under the finger which casts it, is darker than the flesh, and is of a very deep grey. The reason of this is, that much light is reflected from the paper to the dark side of your finger, but very little is reflected from other things to the paper itself in that chink under your finger.

In general, for this reason, a shadow, or, at any rate, the part of the shadow nearest the object, is darker than the dark side of the object. I say in general, because a thousand accidents may interfere to prevent its being so. Take a little bit of glass, as a wine-glass, or the ink-bottle, and play it about a little on the side of your hand farthest from the window; you will presently find you are throwing gleams of light all over the dark side of your hand, and in some positions of the glass the reflection from it will annihilate the shadow altogether, and you will see your hand dark on the white paper. Now a stupid painter would represent, for instance, a drinking-glass beside the hand of one of his figures, and because he had been taught by rule that "shadow was darker than the dark side," he would never think of the reflection from the glass, but paint a dark grey under the hand, just as if no glass were there. But a great painter would be sure to think of the true effect, and paint it; and then comes the stupid critic, and wonders why the hand is so light on its dark side.

Thus it is always dangerous to assert anything as a *rule* in matters of art; yet it is useful for you to remember that, in

a general way, a shadow is darker than the dark side of the thing that casts it, supposing the colours otherwise the same ; that is to say, when a white object casts a shadow on a white surface, or a dark object on a dark surface : the rule will not hold if the colours are different, the shadow of a black object on a white surface being, of course, not so dark, usually, as the black thing casting it. The only way to ascertain the ultimate truth in such matters is to *look* for it ; but, in the meantime, you will be helped by noticing that the cracks in the stone are little ravines, on one side of which the light strikes sharply, while the other is in shade. This dark side usually casts a little darker shadow at the bottom of the crack ; and the general tone of the stone surface is not so bright as the light bank of the ravine. And, therefore, if you get the surface of the object of a uniform tint, more or less indicative of shade, and then scratch out a white spot or streak in it of any shape ; by putting a dark touch beside this white one, you may turn it, as you choose, into either a ridge or an incision, into either a boss or a cavity. If you put the dark touch on the side of it nearest the sun, or rather, nearest the place that the light comes from, you will make it a cut or cavity ; if you put it on the opposite side, you will make it a ridge or mound : and the complete success of the effect depends less on depth of shade than on the rightness of the drawing ; that is to say, on the evident correspondence of the form of the shadow with the form that casts it. In drawing rocks, or wood, or anything irregularly shaped, you will gain far more by a little patience in following the forms carefully, though with slight touches, than by laboured finishing of textures of surface and transparencies of shadow.

When you have got the whole well into shape, proceed to lay on the stains and spots with great care, quite as much as you gave to the forms. Very often, spots or bars of local colour do more to express form than even the light and shade, and they are always interesting as the means by which Nature carries light into her shadows, and shade into her lights, an art of which we shall have more to say hereafter, in speaking of composition. Fig. 5. is a rough sketch of a fossil sea-urchin,

in which the projections of the shell are of black flint, coming through a chalky surface. These projections form dark spots in the light ; and their sides, rising out of the shadow, form smaller whitish spots in the dark. You may take such scattered lights as these out with the penknife, provided you are just as careful to place them rightly, as if you got them by a more laborious process.

When you have once got the feeling of the way in which gradation expresses roundness and projection, you may try your strength on anything natural or artificial that happens to take your fancy, provided it be not too complicated in form. I have asked you to draw a stone first, because any irregularities and failures in your shading will be less offensive to you, as being partly characteristic of the rough stone surface, than they would be in a more delicate subject ; and you may as well go on drawing rounded stones of different shapes for a little while, till you find you can really shade delicately. You may then take up folds of thick white drapery, a napkin or towel thrown carelessly on the table is as good as anything, and try to express them in the same way ; only now you will find that your shades must be wrought with perfect unity and tenderness, or you will lose the flow of the folds. Always remember that a little bit perfected is worth more than many scrawls ; whenever you feel yourself inclined to scrawl, give up work resolutely, and do not go back to it till next day. Of course your towel or napkin must be put on something that may be locked up, so that its folds shall not be disturbed till you have finished. If you find that the folds will not look right, get a photograph of a piece of drapery (there are plenty now to be bought, taken from the sculpture of the cathedrals of Rheims, Amiens, and Chartres, which will at once educate your hand and your taste), and copy some piece of that ; you will then ascertain what it is that is wanting in your studies from nature, whether more gradation, or greater watchfulness of the disposition of the folds. Probably for some time you will find yourself failing painfully in both, for drapery is very difficult to follow in its sweeps ; but do not lose courage, for the greater the difficulty, the greater the gain in the effort. If

your eye is more just in measurement of form than delicate in perception of tint, a pattern on the folded surface will help you. Try whether it does or not; and if the patterned drapery confuses you, keep for a time to the simple white one; but if it helps you, continue to choose patterned stuffs (tartans, and simple chequered designs are better at first than flowered ones), and even though it should confuse you, begin pretty soon to use a pattern occasionally, copying all the distortions and perspective modifications of it among the folds with scrupulous care.

Neither must you suppose yourself condescending in doing this. The greatest masters are always fond of drawing patterns; and the greater they are, the more pains they take to do it truly.* Nor can there be better practice at any time, as introductory to the nobler complication of natural detail. For when you can draw the spots which follow the folds of a printed stuff, you will have some chance of following the spots which fall into the folds of the skin of a leopard as he leaps; but if you cannot draw the manufacture, assuredly you will never be able to draw the creature. So the cloudings on a piece of wood, carefully drawn, will be the best introduction to the drawing of the clouds of the sky, or the waves of the sea; and the dead leaf-patterns on a damask drapery, well rendered, will enable you to disentangle masterfully the living leaf-patterns of a thorn thicket, or a violet bank.

Observe, however, in drawing any stuffs, or bindings of books, or other finely textured substances, do not trouble yourself, as yet, much about the woolliness or gauziiness of the thing; but get it right in shade and fold, and true in pattern. We shall see, in the course of after-practice, how the penned

* If we had any business with the reasons of this, I might, perhaps, be able to show you some metaphysical ones for the enjoyment, by truly artistical minds, of the changes wrought by light, and shade, and perspective in patterned surfaces; but this is at present not to the point; and all that you need to know is that the drawing of such things is good exercise, and moreover a kind of exercise which Titian, Veronese, Tintoret, Giorgione, and Turner, all enjoyed, and strove to excel in.

lines may be made indicative of texture ; but at present attend only to the light, and shade, and pattern. You will be puzzled at first by *lustrous* surfaces, but a little attention will show you that the expression of these depends merely on the right drawing of their light, and shade, and reflections. Put a small black japanned tray on the table in front of some books ; and you will see it reflects the objects beyond it as in a little black rippled pond ; its own colour mingling always with that of the reflected objects. Draw these reflections of the books properly, making them dark and distorted, as you will see that they are, and you will find that this gives the lustre to your tray. It is not well, however, to draw polished objects in general practice ; only you should do one or two in order to understand the aspect of any lustrous portion of other things, such as you cannot avoid ; the gold, for instance, on the edges of books, or the shining of silk and damask, in which lies a great part of the expression of their folds. Observe, also, that there are very few things which are totally without lustre : you will frequently find a light which puzzles you, on some apparently dull surface, to be the dim image of another object.

And now, as soon as you can conscientiously assure me that with the point of the pen or pencil you can lay on any form and shade you like, I give you leave to use the brush with one colour,—sepia, or blue-black, or mixed cobalt and blue-black, or neutral tint ; and this will much facilitate your study, and refresh you. But, preliminarily, you must do one or two more exercises in tinting.

EXERCISE IX.

PREPARE your colour as before directed. Take a brush full of it, and strike it on the paper in any irregular shape ; as the brush gets dry sweep the surface of the paper with it as if you were dusting the paper very lightly ; every such sweep of the brush will leave a number of more or less minute interstices in the colour. The lighter and faster every dash the better. Then leave the whole to dry, and as soon as it is dry, with lit-

the colour in your brush, so that you can bring it to a fine point, fill up all the little interstices one by one, so as to make the whole as even as you can, and fill in the larger gaps with more colour, always trying to let the edges of the first and of the newly applied colour exactly meet, and not lap over each other. When your new colour dries, you will find it in places a little paler than the first. Retouch it, therefore, trying to get the whole to look quite one piece. A very small bit of colour thus filled up with your very best care, and brought to look as if it had been quite even from the first, will give you better practice and more skill than a great deal filled in carelessly ; so do it with your best patience, not leaving the most minute spot of white ; and do not fill in the large pieces first and then go to the small, but quietly and steadily cover in the whole up to a marked limit ; then advance a little farther, and so on ; thus always seeing distinctly what is done and what undone.

EXERCISE X.

LAY a coat of the blue, prepared as usual, over a whole square of paper. Let it dry. Then another coat over four-fifths of the square, or thereabouts, leaving the edge rather irregular than straight, and let it dry. Then another coat over three-fifths ; another over two-fifths ; and the last over one-fifth ; so that the square may present the appearance of gradual increase in darkness in five bands, each darker than the one beyond it. Then, with the brush rather dry (as in the former exercise, when filling up the interstices), try, with small touches, like those used in the pen etching, only a little broader, to add shade delicately beyond each edge, so as to lead the darker tints into the paler ones imperceptibly. By touching the paper very lightly, and putting a multitude of little touches, crossing and recrossing in every direction, you will gradually be able to work up to the darker tints, outside of each, so as quite to efface their edges, and unite them tenderly with the next tint. The whole square, when done, should look evenly shaded from dark to pale, with no bars ;

only a crossing texture of touches, something like chopped straw, over the whole.*

Next, take your rounded pebble ; arrange it in any light and shade you like ; outline it very loosely with the pencil. Put on a wash of colour, prepared *very* pale, quite flat over all of it, except the highest light, leaving the edge of your colour quite sharp. Then another wash, extending only over the darker parts, leaving the edge of that sharp also, as in tinting the square. Then another wash over the still darker parts, and another over the darkest, leaving each edge to dry sharp. Then, with the small touches, efface the edges, reinforce the darks, and work the whole delicately together, as you would with the pen, till you have got it to the likeness of the true light and shade. You will find that the tint underneath is a great help, and that you can now get effects much more subtle and complete than with the pen merely.

The use of leaving the edges always sharp is that you may not trouble or vex the colour, but let it lie as it falls suddenly on the paper ; colour looks much more lovely when it has been laid on with a dash of the brush, and left to dry in its own way, than when it has been dragged about and disturbed ; so that it is always better to let the edges and forms be a *little* wrong, even if one cannot correct them afterwards, than to lose this fresh quality of the tint. Very great masters in water-colour can lay on the true forms at once with a dash, and *bad* masters in water-colour lay on grossly false forms with a dash, and leave them false ; for people in general, not knowing false from true, are as much pleased with the appearance of power in the irregular blot as with the presence of power in the determined one ; but *we*, in our beginnings, must do as much as we can with the broad dash, and then correct with the point, till we are quite right. We must take care to be right, at whatever cost of pains ; and then gradually we shall find we can be right with freedom.

I have hitherto limited you to colour mixed with two or

* The use of acquiring this habit of execution is that you may be able, when you begin to colour, to let one hue be seen in minute portions, gleaming between the touches of another.

three teaspoonfuls of water ; but in finishing your light and shade from the stone, you may, as you efface the edge of the palest coat towards the light, use the colour for the small touches with more and more water, till it is so pale as not to be perceptible. Thus you may obtain a *perfect* gradation to the light. And in reinforcing the darks, when they are very dark, you may use less and less water. If you take the colour tolerably dark on your brush, only always liquid (not pasty), and dash away the superfluous colour on blotting-paper, you will find that, touching the paper very lightly with the dry brush, you can, by repeated touches, produce a dusty kind of bloom, very valuable in giving depth to shadow ; but it requires great patience and delicacy of hand to do this properly. You will find much of this kind of work in the grounds and shadows of William Hunt's drawings.*

As you get used to the brush and colour, you will gradually find out their ways for yourself, and get the management of them. Nothing but practice will do this perfectly ; but you will often save yourself much discouragement by remembering what I have so often asserted,—that if anything goes wrong, it is nearly sure to be refinement that is wanting, not force ; and connexion, not alteration. If you dislike the state your drawing is in, do not lose patience with it, nor dash at it, nor alter its plan, nor rub it desperately out, at the place you think wrong ; but look if there are no shadows you can graduate more perfectly ; no little gaps and rents you can fill ; no forms you can more delicately define : and do not *rush* at any of the errors or incompletions thus discerned, but efface or supply slowly, and you will soon find your drawing take another look. A very useful expedient in producing some effects, is to wet the paper, and then lay the colour on it, more or less wet, according to the effect you want. You will soon see how prettily it gradates itself as it dries ; when dry, you can reinforce it with delicate stippling when you want it darker. Also, while the colour is still damp on the paper, by drying your brush thoroughly, and touching the colour with the brush so dried, you may take out soft lights with great

* William Hunt, of the Old Water-colour Society.

tenderness and precision. Try all sorts of experiments of this kind, noticing how the colour behaves ; but remembering always that your final results must be obtained, and can only be obtained, by pure work with the point, as much as in the pen drawing.

You will find also, as you deal with more and more complicated subjects, that Nature's resources in light and shade are so much richer than yours, that you cannot possibly get all, or anything *like* all, the gradations of shadow in any given group. When this is the case, determine first to keep the broad masses of things distinct : if, for instance, there is a green book, and a white piece of paper, and a black inkstand in the group, be sure to keep the white paper as a light mass, the green book as a middle tint mass, the black inkstand as a dark mass ; and do not shade the folds in the paper, or corners of the book, so as to equal in depth the darkness of the inkstand. The great difference between the masters of light and shade, and imperfect artists, is the power of the former to draw so delicately as to express form in a dark-coloured object with little light, and in a light-coloured object with little darkness ; and it is better even to leave the forms here and there unsatisfactorily rendered than to lose the general relations of the great masses. And this observe, not because masses are grand or desirable things in your composition (for with composition at present you have nothing whatever to do), but because it is a *fact* that things do so present themselves to the eyes of men, and that we see paper, book, and inkstand as three separate things, before we see the wrinkles, or chinks, or corners of any of the three. Understand, therefore, at once, that no detail can be as strongly expressed in drawing as it is in the reality ; and strive to keep all your shadows and marks and minor markings on the masses, lighter than they appear to be in Nature ; you are sure otherwise to get them too dark. You will in doing this find that you cannot get the *projection* of things sufficiently shown ; but never mind that ; there is no need that they should appear to project, but great need that their relations of shade to each other should be preserved. All deceptive projection is obtained by partial exaggeration of

shadow ; and whenever you see it, you may be sure the drawing is more or less bad ; a thoroughly fine drawing or painting will always show a slight tendency towards *flatness*.

Observe, on the other hand, that however white an object may be, there is always some small point of it whiter than the rest. You must therefore have a slight tone of grey over everything in your picture except on the extreme high lights ; even the piece of white paper, in your subject, must be toned slightly down, unless (and there are a thousand chances to one against its being so) it should all be turned so as fully to front the light. By examining the treatment of the white objects in any pictures accessible to you by Paul Veronese or Titian, you will soon understand this.*

As soon as you feel yourself capable of expressing with the brush the undulations of surfaces and the relations of masses, you may proceed to draw more complicated and beautiful things.† And first, the boughs of trees, now not in mere dark relief, but in full rounding. Take the first bit of branch or stump that comes to hand, with a fork in it ; cut off the ends of the forking branches, so as to leave the whole only about a foot in length ; get a piece of paper the same size, fix your bit of branch in some place where its position will not be altered, and draw it thoroughly, in all its light and shade, full size ; striving, above all things, to get an accurate expression of its structure at the fork of the branch. When once you

* At Marlborough House, among the four principal examples of Turner's later water-colour drawing, perhaps the most neglected is that of fishing-boats and fish at sunset. It is one of his most wonderful works, though unfinished. If you examine the larger white fishing-boat sail, you will find it has a little spark of pure white in its right-hand upper corner, about as large as a minute pin's head, and that all the surface of the sail is graduated to that focus. Try to copy this sail once or twice, and you will begin to understand Turner's work. Similarly, the wing of the Cupid in Correggio's large picture in the National Gallery is focussed to two little grains of white at the top of it. The points of light on the white flower in the wreath round the head of the dancing child-faun, in Titian's Bacchus and Ariadne, exemplify the same thing.

† I shall not henceforward *number* the exercises recommended ; as they are distinguished only by increasing difficulty of subject, not by difference of method.

have mastered the tree at its *armpits*, you will have little more trouble with it.

Always draw whatever the background happens to be, exactly as you see it. Wherever you have fastened the bough, you must draw whatever is behind it, ugly or not, else you will never know whether the light and shade are right; they may appear quite wrong to you, only for want of the background.

And this general law is to be observed in all your studies: whatever you draw, draw completely and unalteringly, else you never know if what you have done is right, or whether you *could* have done it rightly had you tried. There is nothing *visible* out of which you may not get useful practice.



FIG. 6.

Next, to put the leaves on your boughs. Gather a small twig with four or five leaves on it, put it into water, put a sheet of light-coloured or white paper behind it, so that all the leaves may be relieved in dark from the white field; then sketch in their dark shape carefully with pencil as you did the complicated boughs, in order to be sure that all their masses and interstices are right in shape before you begin shading, and complete as far as you can

with pen and ink, in the manner of Fig. 6., which is a young shoot of lilac.

You will probably, in spite of all your pattern drawings, be at first puzzled by leaf foreshortening; especially because the look of retirement or projection depends not so much on the perspective of the leaves themselves as on the double sight of the two eyes. Now there are certain artifices by which good

painters can partly conquer this difficulty ; as slight exaggerations of force or colour in the nearer parts, and of obscurity in the more distant ones ; but you must not attempt anything of this kind. When you are first sketching the leaves, shut one of your eyes, fix a point in the background, to bring the point of one of the leaves against, and so sketch the whole bough as you see it in a fixed position, looking with one eye only. Your drawing never can be made to look like the object itself, as you see that object with *both eyes*,* but it can be made perfectly like the object seen with one, and you must be content when you have got a resemblance on these terms.

In order to get clearly at the notion of the thing to be done, take a single long leaf, hold it with its point towards you, and as flat as you can, so as to see nothing of it but its thinness, as if you wanted to know how thin it was ; outline it so. Then slope it down gradually towards you, and watch it as it lengthens out to its full length, held perpendicularly down before you. Draw it in three or four different positions between these extremes, with its ribs as they appear in each position, and you will soon find out how it must be.

Draw first only two or three of the leaves ; then larger clusters ; and practise, in this way, more and more complicated pieces of bough and leafage, till you find you can master the most difficult arrangements, not consisting of more than ten or twelve leaves. You will find as you do this, if you have an opportunity of visiting any gallery of pictures, that you take a much more lively interest than before in the work of the great masters ; you will see that very often their best backgrounds are composed of little more than a few sprays of leafage, carefully studied, brought against the distant sky ; and that another wreath or two form the chief interest of their foregrounds. If you live in London you may test your progress *accurately* by the degree of admiration you feel for the leaves of vine round the head of the Bacchus, in Titian's Bacchus

* If you understand the principle of the stereoscope you will know why ; if not, it does not matter ; trust me for the truth of the statement, as I cannot explain the principle without diagrams and much loss of time.

and Ariadne. All this, however, will not enable you to draw a mass of foliage. You will find, on looking at any rich piece of vegetation, that it is only one or two of the nearer clusters that you can by any possibility draw in this complete manner. The mass is too vast, and too intricate, to be thus dealt with.

You must now therefore have recourse to some confused mode of execution, capable of expressing the confusion of Nature. And, first, you must understand what the character of that confusion is. If you look carefully at the outer sprays of any tree at twenty or thirty yards' distance, you will see them defined against the sky in masses, which, at first, look quite definite ; but if you examine them, you will see, mingled with the real shapes of leaves, many indistinct lines, which are,



FIG. 7.

some of them, stalks of leaves, and some, leaves seen with the edge turned towards you, and coming into sight in a broken way ; for, supposing the real leaf shape to be as at *a*, Fig. 7., this, when removed some yards from the eye, will appear dark against the sky, as at *b* ; then, when removed some yards farther still, the stalk and point disappear altogether, the middle of the leaf becomes little more than a line ; and the result is the condition at *c*, only with this farther subtlety in the look of it, inexpressible in the woodcut, that the stalk and point of the leaf, though they have disappeared to the eye, have yet some influence in *checking the light* at the places where they exist, and cause a slight dimness about the part of the leaf which remains visible, so that its perfect effect could only be rendered by two layers of colour, one subduing the sky tone

a little, the next drawing the broken portions of the leaf, as at c, and carefully indicating the greater darkness of the spot in the middle, where the under side of the leaf is.

This is the perfect theory of the matter. In practice we cannot reach such accuracy; but we shall be able to render the general look of the foliage satisfactorily by the following mode of practice.

Gather a spray of any tree, about a foot or eighteen inches long. Fix it firmly by the stem in anything that will support it steadily; put it about eight feet away from you, or ten if



FIG. 8.

you are far-sighted. Put a sheet of not very white paper behind it, as usual. Then draw very carefully, first placing them with pencil, and then filling them up with ink, every leaf, mass and stalk of it in simple black profile, as you see them against the paper: Fig. 8. is a bough of *Phillyrea* so drawn. Do not be afraid of running the leaves into a black mass when they come together; this exercise is only to teach you what the actual shapes of such masses are when seen against the sky.

Make two careful studies of this kind of one bough of every common tree—oak, ash, elm, birch, beech, &c.; in fact, if you

are good, and industrious, you will make one such study carefully at least three times a week, until you have examples of every sort of tree and shrub you can get branches of. You are to make two studies of each bough, for this reason—all masses of foliage have an upper and under surface, and the side view of them, or profile, shows a wholly different organisation of branches from that seen in the view from above. They are generally seen more or less in profile, as you look at the whole tree, and Nature puts her best composition into the profile arrangement. But the view from above or below occurs not unfrequently, also, and it is quite necessary you should draw it if you wish to understand the anatomy of the tree. The difference between the two views is often far greater



FIG. 9.

than you could easily conceive. For instance, in Fig. 9., *a* is the upper view, and *b* the profile, of a single spray of *Phillyrea*. Fig. 8. is an intermediate view of a larger bough; seen from beneath, but at some lateral distance also.

When you have done a few branches in this manner, take one of the *drawings*, and put it first a yard away from you, then a yard and a half, then two yards; observe how the thinner stalks and leaves gradually disappear, leaving only a vague and slight darkness where they were, and make another study of the effect at each distance, taking care to draw nothing more than you really see, for in this consists all the difference between what would be merely a *miniature* drawing of the leaves seen *near*, and a *full-size* drawing of the same leaves at a distance. By full size, I mean the size which they would really appear of if their outline were traced through a pane of

glass held at the same distance from the eye at which you mean to hold your drawing. You can always ascertain this full size of any object by holding your paper upright before you, at the distance from your eye at which you wish your drawing to be seen. Bring its edge across the object you have to draw, and mark upon this edge the points where the outline of the object crosses, or goes behind, the edge of the paper. You will always find it, thus measured, smaller than you supposed.

When you have made a few careful experiments of this kind on your own drawings, (which are better for practice, at first, than the real trees, because the black profile in the drawing is quite stable, and does not shake, and is not confused by sparkles of lustre on the leaves,) you may try the extremities of the real trees, only not doing much at a time, for the brightness of the sky will dazzle and perplex your sight. And this brightness causes, I believe, some loss of the outline itself; at least the chemical action of the light in a photograph extends much within the edges of the leaves, and, as it were, eats them away so that no tree extremity, stand it ever so still, nor any other form coming against bright sky, is truly drawn by a photograph; and if you once succeed in drawing a few sprays rightly, you will find the result much more lovely and interesting than any photograph can be.

All this difficulty, however, attaches to the rendering merely the dark form of the sprays as they come against the sky. Within those sprays, and in the heart of the tree, there is a complexity of a much more embarrassing kind; for nearly all leaves have some lustre, and *all* are more or less translucent (letting light through them); therefore, in any given leaf, besides the intricacies of its own proper shadows and foreshortenings, there are three series of circumstances which alter or hide its forms. First, shadows cast on it by other leaves—often very forcibly. Secondly, light reflected from its lustrous surface, sometimes the blue of the sky, sometimes the white of clouds, or the sun itself flashing like a star. Thirdly, forms and shadows of other leaves, seen as darkness *through* the translucent parts of the leaf; a most important

element of foliage effect, but wholly neglected by landscape artists in general.

The consequence of all this is, that except now and then by chance, the form of a complete leaf is never seen ; but a marvellous and quaint confusion, very definite, indeed, in its evidence of direction of growth, and unity of action, but wholly indefinable and inextricable, part by part, by any amount of patience. You cannot possibly work it out in fac simile, though you took a twelvemonth's time to a tree ; and you must therefore try to discover some mode of execution which will more or less imitate, by its own variety and mystery, the variety and mystery of Nature, without absolute delineation of detail.

Now I have led you to this conclusion by observation of tree form only, because in that the thing to be proved is clearest. But no natural object exists which does not involve in some part or parts of it this inimitableness, this mystery of quantity, which needs peculiarity of handling and trick of touch to express it completely. If leaves are intricate, so is moss, so is foam, so is rock cleavage, so are fur and hair, and texture of drapery, and of clouds. And although methods and dexterities of handling are wholly useless if you have not gained first the thorough knowledge of the form of the thing ; so that if you cannot draw a branch perfectly, then much less a tree ; and if not a wreath of mist perfectly, much less a flock of clouds ; and if not a single grass blade perfectly, much less a grass bank ; yet having once got this power over decisive form, you may safely—and must, in order to perfection of work—carry out your knowledge by every aid of method and dexterity of hand.

But, in order to find out what method can do, you must now look at Art as well as at Nature, and see what means painters and engravers have actually employed for the expression of these subtleties. Whereupon arises the question, what opportunity have you to obtain engravings ? You ought, if it is at all in your power, to possess yourself of a certain number of good examples of Turner's engraved works : if this be not in your power, you must just make the best use you can

of the shop windows, or of any plates of which you can obtain a loan. Very possibly, the difficulty of getting sight of them may stimulate you to put them to better use. But, supposing your means admit of your doing so, possess yourself, first, of the illustrated edition either of Rogers's Italy or Rogers's Poems, and then of about a dozen of the plates named in the annexed lists. The prefixed letters indicate the particular points deserving your study in each engraving.* Be sure,

* If you can, get first the plates marked with a star. The letters mean as follows:—

a stands for architecture, including distant grouping of towns, cottages, &c.

c clouds, including mist and aerial effects.

f foliage.

g ground, including low hills, when not rocky.

l effects of light.

m mountains, or bold rocky ground.

p power of general arrangement and effect.

q quiet water.

r running or rough water; or rivers, even if calm, when their line of flow is beautifully marked.

From the England Series.

a c f r. Arundel.

a f l. Ashby de la Zouche.

a l q r. Barnard Castle.*

f m r. Bolton Abbey.

f g r. Buckfastleigh.*

a l p. Caernarvon.

c l q. Castle Upnor.

a f l. Colchester.

l q. Cowes.

c f p. Dartmouth Cove.

c l q. Flint Castle.*

a f g l. Knaresborough.*

m r. High Force of Tees.*

f m. Valle Crucis.

a f q. Trematon.

a f p. Lancaster.

c l m r. Lancaster Sands.*

a g f. Launceston.

c f l r. Leicester Abbey.

f r. Ludlow.

a f l. Margate.

a l q. Orford.

c p. Plymouth.

f. Powis Castle.

l m q. Prudhoe Castle.

f l m r. Chain Bridge over Tees.*

m q. Ulleswater.

From the Keepsake.

m p q. Arona.

m. Drachenfels.

f l. Marley.*

p. St. Germain en Leye.

l p q. Florence.

l m. Ballyburgh Ness.*

therefore, that your selection includes, at all events, one plate marked with each letter—of course the plates marked with two or three letters are, for the most part, the best. Do not get more than twelve of these plates, nor even all the twelve at first. For the more engravings you have, the less attention you will pay to them. It is a general truth, that the enjoyment derivable from art cannot be increased in quantity, beyond a certain point, by quantity of possession; it is only spread, as it were, over a larger surface, and very often dulled by finding ideas repeated in different works. Now, for a beginner, it is always better that his attention should be concentrated on one or two good things, and all his enjoyment founded on them, than that he should look at many, with divided thoughts. He has much to discover; and his best way of discovering it is to think long over few things, and watch them earnestly. It is one of the worst errors of this age to try to know and to see too much: the men who seem to know everything, never in reality know anything rightly. Beware of *hand-book* knowledge.

These engravings are, in general, more for you to look at

From the Bible Series.

<i>f m.</i> Mount Lebanon.	<i>a c g.</i> Joppa.
<i>m.</i> Rock of Moses at Sinai.	<i>c l p q.</i> Solomon's Pools.*
<i>a l m.</i> Jericho.	<i>a l.</i> Santa Saba.
<i>a l.</i> Pool of Bethesda.	

From Scott's Works.

<i>p r.</i> Melrose.	<i>c m.</i> Glencoe.
<i>f r.</i> Dryburgh.*	<i>c m.</i> Loch Coriskin.
<i>a l.</i> Caerlaverock.	

From the "Rivers of France."

<i>a q.</i> Château of Amboise, with large bridge on right.	<i>a p.</i> Rouen Cathedral.
<i>l p r.</i> Rouen, looking down the river, poplars on right.*	<i>f p.</i> Pont de l'Arche.
<i>a l p.</i> Rouen, with cathedral and rainbow, avenue on the left.	<i>f l p.</i> View on the Seine, with avenue.
	<i>a c p.</i> Bridge of Meulan.
	<i>c g p r.</i> Caudebec.*

than to copy ; and they will be of more use to you when we come to talk of composition, than they are at present ; still, it will do you a great deal of good, sometimes to try how far you can get their delicate texture, or gradations of tone ; as your pen-and-ink drawing will be apt to incline too much to a scratchy and broken kind of shade. For instance, the texture of the white convent wall, and the drawing of its tiled roof, in the vignette at p. 227. of Rogers's Poems, is as exquisite as work can possibly be ; and it will be a great and profitable achievement if you can at all approach it. In like manner, if you can at all imitate the dark distant country at p. 7., or the sky at p. 80., of the same volume, or the foliage at pp. 12. and 144., it will be good gain ; and if you can once draw the rolling clouds and running river at p. 9. of the "Italy," or the city in the vignette of Aosta at p. 25., or the moonlight at p. 223., you will find that even Nature herself cannot afterwards very terribly puzzle you with her torrents, or towers, or moonlight.

You need not copy touch for touch, but try to get the same effect. And if you feel discouraged by the delicacy required, and begin to think that engraving is not drawing, and that copying it cannot help you to draw, remember that it differs from common drawing only by the difficulties it has to encounter. You perhaps have got into a careless habit of thinking that engraving is a mere *business*, easy enough when one has got into the knack of it. On the contrary, it is a form of drawing more difficult than common drawing, by exactly so much as it is more difficult to cut steel than to move the pencil over paper. It is true that there are certain mechanical aids and methods which reduce it at certain stages either to pure machine work, or to more or less a habit of hand and arm ; but this is not so in the foliage you are trying to copy, of which the best and prettiest parts are always etched—that is, drawn with a fine steel point and free hand : only the line made is white instead of black, which renders it much more difficult to judge of what you are about. And the trying to copy these plates will be good for you, because it will awaken you to the real labour and skill of the engraver, and make you

understand a little how people must work, in this world, who have really to *do* anything in it.

Do not, however, suppose that I give you the engraving as a model—far from it; but it is necessary you should be able to do as well * before you think of doing better, and you will find many little helps and hints in the various work of it. Only remember that *all* engravers' foregrounds are bad; whenever you see the peculiar wriggling parallel lines of modern engravings become distinct, you must not copy; nor admire: it is only the softer masses, and distances; and portions of the foliage in the plates marked *f*, which you may copy. The best for this purpose, if you can get it, is the "Chain bridge over the Tees," of the England series; the thicket on the right is very beautiful and instructive, and very like Turner. The foliage in the "Ludlow" and "Powis" is also remarkably good.

Besides these line engravings, and to protect you from what harm there is in their influence, you are to provide yourself, if possible, with a Rembrandt etching, or a photograph of one (of figures, not landscape). It does not matter of what subject, or whether a sketchy or finished one, but the sketchy ones are generally cheapest, and will teach you most. Copy it as well as you can, noticing especially that Rembrandt's most rapid lines have steady purpose; and that they are laid with almost inconceivable precision when the object becomes at all interesting. The "Prodigal Son," "Death of the Virgin," "Abraham and Isaac," and such others, containing incident and character rather than chiaroscuro, will be the most instructive. You can buy one; copy it well; then exchange it, at little loss, for another; and so, gradually, obtain a good knowledge of his system. Whenever you have an opportunity of examining his work at museums, &c., do so with the greatest care, not looking at *many* things, but a long time at each. You must also provide yourself, if possible, with an engraving of Albert Durer's. This you will not be able to copy; but

* As *well*;—not as minutely: the diamond cuts finer lines on the steel than you can draw on paper with your pen; but you must be able to get tones as even, and touches as firm.

you must keep it beside you, and refer to it as a standard of precision in line. If you can get one with a *wing* in it, it will be best. The crest with the cock, that with the skull and satyr, and the "Melancholy," are the best you could have, but any will do. Perfection in chiaroscuro drawing lies between these two masters, Rembrandt and Durer. Rembrandt is often too loose and vague ; and Durer has little or no effect of mist or uncertainty. If you can see anywhere a drawing by Leonardo, you will find it balanced between the two characters ; but there are no engravings which present this perfection, and your style will be best formed, therefore, by alternate study of Rembrandt and Durer. Lean rather to Durer ; it is better for amateurs to err on the side of precision than on that of vagueness : and though, as I have just said, you cannot copy a Durer, yet try every now and then a quarter of an inch square or so, and see how much nearer you can come ; you cannot possibly try to draw the leafy crown of the "Melancholia" too often.

If you cannot get either a Rembrandt or a Durer, you may still learn much by carefully studying any of George Cruikshank's etchings, or Leech's woodcuts in *Punch*, on the free side ; with Alfred Rethel's and Richter's * on the severe side. But in so doing you will need to notice the following points :

When either the material (as the copper or wood) or the time of an artist, does not permit him to make a perfect drawing,—that is to say, one in which no lines shall be prominently visible,—and he is reduced to show the black lines, either drawn by the pen, or on the wood, it is better to make these lines help, as far as may be, the expression of texture and form. You will thus find many textures, as of cloth or grass or flesh, and many subtle effects of light, expressed by Leech with zigzag or crossed or curiously broken lines ; and you will see that Alfred Rethel and Richter constantly express the direction and rounding of surfaces by the direction of the lines which shade them. All these various means of expression will be useful to you, as far as you can learn them, provided

* See, for account of these plates, the Appendix on "Works to be studied."

you remember that they are merely a kind of shorthand ; telling certain facts, not in quite the *right* way, but in the only possible way under the conditions : and provided in any after use of such means, you never try to show your own dexterity ; but only to get as much record of the object as you can in a given time ; and that you continually make efforts to go beyond shorthand, and draw portions of the objects rightly.

And touching this question of *direction* of lines as indicating that of surface, observe these few points :

If lines are to be distinctly shown, it is better that, so far as they *can* indicate any thing by their direction, they should explain rather than oppose the general character of the object.



FIG. 10.

Thus, in the piece of woodcut from Titian, Fig. 10., the lines are serviceable by expressing, not only the shade of the trunk, but partly also its roundness, and the flow of its grain. And Albert Durer, whose work was chiefly engraving, sets himself always thus to make his lines as *valuable* as possible ; telling much by them, both of shade and direction of surface : and if you were always to be limited to engraving on copper (and did not want to express effects of mist or darkness, as well as delicate forms), Albert Durer's way of work would be the best example for you. But, inasmuch as the perfect way of drawing is by shade without lines, and the great painters always conceive their subject as complete, even when they are sketching

it most rapidly, you will find that, when they are not limited in means, they do not much trust to direction of line, but will often scratch in the shade of a rounded surface with nearly straight lines, that is to say, with the easiest and quickest lines possible to themselves.

When the hand is free, the easiest line for it to draw is one inclining from the left upward to the right, or *vice versâ*, from the right downwards to the left; and when done very quickly, the line is hooked a little at the end by the effort at return to the next. Hence, you will always find the pencil, chalk, or pen sketch of a *very* great master full of these kind of lines; and even if he draws carefully, you will find him using simple straight lines from left to right, when an inferior master will have used curved ones. Fig. 11. is a fair facsimile of part of a sketch of Raphael's, which exhibits these characters very distinct-



FIG. 11.

ly. Even the careful drawings of Leonardo da Vinci are shaded most commonly with straight lines; and you may always assume it as a point increasing the probability of a drawing being by a great master if you find rounded surfaces, such as those of cheeks or lips, shaded with straight lines.

But you will also now understand how easy it must be for

dishonest dealers to forge or imitate scrawled sketches like Figure 11., and pass them for the work of great masters ; and how the power of determining the genuineness of a drawing depends entirely on your knowing the *facts* of the object drawn, and perceiving whether the hasty handling is *all* conducive to the expression of those truths. In a great man's work, at its fastest, no line is thrown away, and it is not by the rapidity, but the *economy* of the execution that you know him to be great. Now to judge of this economy, you must know exactly what he meant to do, otherwise you cannot of course discern how far he has done it ; that is, you must know the beauty and nature of the thing he was drawing. All judgment of art thus finally finds itself on knowledge of Nature.

But farther observe, that this scrawled, or economic, or impetuous execution is never *affectedly* impetuous. If a great man is not in a hurry, he never pretends to be ; if he has no eagerness in his heart, he puts none into his hand ; if he thinks his effect would be better got with *two* lines, he never, to show his dexterity, tries to do it with one. Be assured, therefore (and this is a matter of great importance), that you will never produce a great drawing by imitating the *execution* of a great master. Acquire his knowledge and share his feelings, and the easy execution will fall from your hand as it did from his ; but if you merely scrawl because he scrawled, or blot because he blotted, you will not only never advance in power, but every able draughtsman, and every judge whose opinion is worth having, will know you for a cheat, and despise you accordingly.

Again, observe respecting the use of outline :

All merely outlined drawings are bad, for the simple reason, that an artist of any power can always do more, and tell more, by quitting his outlines occasionally, and scratching in a few lines for shade, than he can by restricting himself to outline only. Hence the fact of his so restricting himself, whatever may be the occasion, shows him to be a bad draughtsman, and not to know how to apply his power economically. This hard law, however, bears only on drawings meant to remain in the state in which you see them ; not on those which were

meant to be proceeded with, or for some mechanical use. It is sometimes necessary to draw pure outlines, as an incipient arrangement of a composition, to be filled up afterwards with colour, or to be pricked through and used as patterns or tracings; but if, with no such ultimate object, making the drawing wholly for its own sake, and meaning it to remain in the state he leaves it, an artist restricts himself to outline, he is a bad draughtsman, and his work is bad. There is no exception to this law. A good artist habitually sees masses, not edges, and can in every case make his drawing more expressive (with any given quantity of work) by rapid shade than by contours; so that all good work whatever is more or less touched with shade, and more or less interrupted as outline.

Hence, the published works of Retsch, and all the English imitations of them, and all outline engravings from pictures, are bad work, and only serve to corrupt the public taste, and of such outlines, the worst are those which are darkened in some part of their course by way of expressing the dark side, as Flaxman's from Dante, and such others; because an outline can only be true so long as it accurately represents the form of the given object with *one* of its edges.

Thus, the outline *a* and the outline *b*, Fig. 12., are both *true* outlines of a ball; because, however thick the line may be, whether we take the interior or exterior edge of it, that edge of it always draws a true circle. But *c* is a false outline of a ball, because either the inner or outer edge of the black line

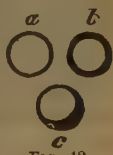


FIG. 12.

must be an untrue circle, else the line could not be thicker in one place than another. Hence all "force," as it is called, is gained by falsification of the contours; so that no artist whose eye is true and fine could endure to look at it. It does indeed often happen that a painter, sketching rapidly, and trying again and again for some line which he cannot quite strike, blackens or loads the first line by setting others beside and across it; and then a careless observer supposes it has been thickened on purpose; or, sometimes also, at a place where shade is afterwards to enclose the form, the painter will strike a broad dash of this shade beside his outline at once, looking as if he meant

to thicken the outline ; whereas this broad line is only the first instalment of the future shadow, and the outline is really drawn with its inner edge. And thus, far from good draughtsmen darkening the lines which turn away from the light, the *tendency* with them is rather to darken them towards the light, for it is there in general that shade will ultimately enclose them. The best example of this treatment that I know is Raphael's sketch, in the Louvre, of the head of the angel pursuing Heliodorus, the one that shows part of the left eye ; where the dark strong lines which terminate the nose and forehead towards the light are opposed to tender and light ones behind the ear, and in other places towards the shade. You will see in Fig. 11. the same principle variously exemplified ; the principal dark lines, in the head and drapery of the arms, being on the side turned to the light.

All these refinements and ultimate principles, however, do not affect your drawing for the present. You must try to make your outlines as *equal* as possible ; and employ pure outline only for the two following purposes : either (1.) to steady your hand, as in Exercise II., for if you cannot draw the line itself, you will never be able to terminate your shadow in the precise shape required, when the line is absent ; or (2.) to give you shorthand memoranda of forms, when you are pressed for time. Thus the forms of distant trees in groups are defined, for the most part, by the light edge of the rounded mass of the nearer one being shown against the darker part of the rounded mass of a more distant one ; and to draw this properly, nearly as much work is required to round each tree as to round the stone in Fig. 5. Of course you cannot often get time to do this ; but if you mark the terminal line of each tree as is done by Durer in Fig. 13., you will get a most useful memorandum of their arrangement, and a very interesting drawing. Only observe in doing this, you must not, because the procedure is a quick one, hurry that procedure itself. You will find, on copying that bit of Durer, that every one of his lines is firm, deliberate, and accurately descriptive as far as it goes. It means a bush of such a size

and such a shape, definitely observed and set down ; it contains a true “*signalement*” of every nut-tree, and apple-tree, and higher bit of hedge, all round that village. If you have not time to draw thus carefully, do not draw at all—you are merely wasting your work and spoiling your taste. When you have had four or five years’ practice you may be able to make useful memoranda at a rapid rate, but not yet ; except sometimes of light and shade, in a way of which I will tell you presently. And this use of outline, note farther, is wholly confined to objects which have *edges* or *limits*. You can out-



FIG. 13.

line a tree or a stone, when it rises against another tree or stone ; but you cannot outline folds in drapery, or waves in water ; if these are to be expressed at all it must be by some sort of shade, and therefore the rule that no good drawing can consist throughout of pure outline remains absolute. You see, in that woodcut of Durer’s, his reason for even limiting himself so much to outline as he has, in those distant woods and plains, is that he may leave them in bright light, to be thrown out still more by the dark sky and the dark village spire ; and the scene becomes real and sunny only by the addition of these shades.

Understanding, then, thus much of the use of outline, we will go back to our question about tree drawing left unanswered at page 60.

We were, you remember, in pursuit of mystery among the leaves. Now, it is quite easy to obtain mystery and disorder, to any extent; but the difficulty is to keep organisation in the midst of mystery. And you will never succeed in doing this unless you lean always to the definite side, and allow yourself rarely to become quite vague, at least through all your

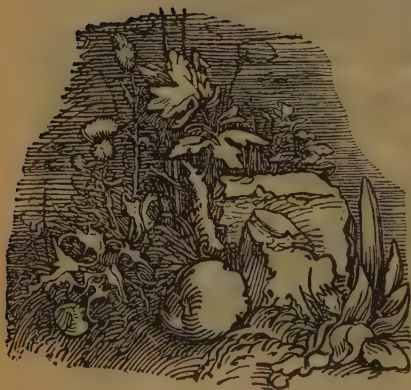


FIG. 14.



FIG. 15.

early practice. So, after your single groups of leaves, your first step must be to conditions like Figs. 14. and 15., which are careful facsimiles of two portions of a beautiful woodcut of Durer's, the *Flight into Egypt*. Copy these carefully,—never mind how little at a time, but thoroughly; then trace the Durer, and apply it to your drawing, and do not be content till the one fits the other, else your eye is not true enough to carry you safely through meshes of real leaves. And in the course of doing this, you will find that not a line nor dot of Durer's can be displaced without harm; that all add to

the effect, and either express something, or illumine something, or relieve something. If, afterwards, you copy any of the pieces of modern tree drawing, of which so many rich examples are given constantly in our cheap illustrated periodicals (any of the Christmas numbers of last year's *Illustrated News* or *Times* are full of them), you will see that, though good and forcible general effect is produced, the lines are

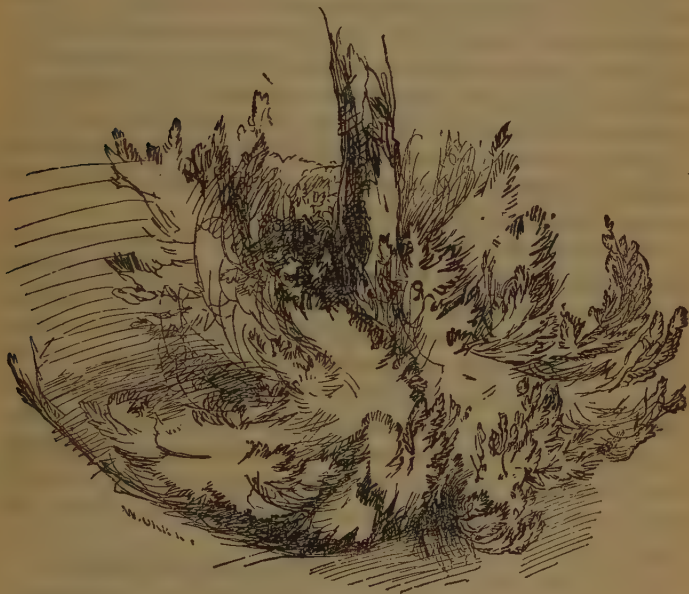


FIG. 16.

thrown in by thousands without special intention, and might just as well go one way as another, so only that there be enough of them to produce all together a well-shaped effect of intricacy: and you will find that a little careless scratching about with your pen will bring you very near the same result without an effort; but that no scratching of pen, nor any fortunate chance, nor anything but downright skill and thought, will imitate so much as one leaf of Durer's. Yet

there is considerable intricacy and glittering confusion in the interstices of those vine leaves of his, as well as of the grass.

When you have got familiarised to this firm manner, you may draw from Nature as much as you like in the same way ; and when you are tired of the intense care required for this, you may fall into a little more easy massing of the leaves, as in Fig. 10. p. 66.) This is facsimilèd from an engraving after Titian, but an engraving not quite first-rate in manner, the leaves being a little too formal ; still, it is a good enough model for your times of rest ; and when you cannot carry the thing even so far as this, you may sketch the forms of the masses, as in Fig. 16.,* taking care always to have thorough command over your hand ; that is, not to let the mass take a free shape because your hand ran glibly over the paper, but because in nature it has actually a free and noble shape, and you have faithfully followed the same.

And now that we have come to questions of *noble* shape, as well as true shape, and that we are going to draw from nature at our pleasure, other considerations enter into the business, which are by no means confined to *first* practice, but extend to all practice ; these (as this letter is long enough, I should think, to satisfy even the most exacting of correspondents) I will arrange in a second letter ; praying you only to excuse the tiresomeness of this first one—tiresomeness inseparable from directions touching the beginning of any art,—and to believe me, even though I am trying to set you to dull and hard work.

Very faithfully yours,

J. RUSKIN.

* This sketch is not of a tree standing on its head, though it looks like it. You will find it explained presently.

LETTER II.

SKETCHING FROM NATURE.

MY DEAR READER :—

The work we have already gone through together has, I hope, enabled you to draw with fair success, either rounded and simple masses, like stones, or complicated arrangements of form, like those of leaves ; provided only these masses or complexities will stay quiet for you to copy, and do not extend into quantity so great as to baffle your patience. But if we are now to go out to the fields, and to draw anything like a complete landscape, neither of these conditions will any more be observed for us. The clouds will not wait while we copy their heaps or clefts ; the shadows will escape from us as we try to shape them, each, in its stealthy minute march, still leaving light where its tremulous edge had rested the moment before, and involving in eclipse objects that had seemed safe from its influence ; and instead of the small clusters of leaves which we could reckon point by point, embarrassing enough even though numerable, we have now leaves as little to be counted as the sands of the sea, and restless, perhaps, as its foam.

In all that we have to do now, therefore, direct imitation becomes more or less impossible. It is always to be aimed at so far as it is possible ; and when you have time and opportunity, some portions of a landscape may, as you gain greater skill, be rendered with an approximation almost to mirrored portraiture. Still, whatever skill you may reach, there will always be need of judgment to choose, and of speed to seize, certain things that are principal or fugitive ; and you must give more and more effort daily to the observance of characteristic points, and the attainment of concise methods.

I have directed your attention early to foliage for two reasons. First, that it is always accessible as a study ; and secondly, that its modes of growth present simple examples

of the importance of leading or governing lines. It is by seizing these leading lines, when we cannot seize *all*, that likeness and expression are given to a portrait, and grace and a kind of *vital* truth to the rendering of every natural form. I call it *vital* truth, because these chief lines are always expressive of the past history and present action of the thing. They show in a mountain, first, how it was built or heaped up ; and secondly, how it is now being worn away, and from what quarter the wildest storms strike it. In a tree, they show what kind of fortune it has had to endure from its childhood ; how troublesome trees have come in its way, and pushed it aside, and tried to strangle or starve it ; where and when kind trees have sheltered it, and grown up lovingly together with it, bending as it bent ; what winds torment it most ; what boughs of it behave best, and bear most fruit ; and so on. In a wave or cloud, these leading lines show the run of the tide and of the wind, and the sort of change which the water or vapour is at any moment enduring in its form, as it meets shore, or counterwave, or melting sunshine. Now remember, nothing distinguishes great men from inferior men more than their always, whether in life or in art, *knowing the way things are going*. Your dunce thinks they are standing still, and draws them all fixed ; your wise man sees the change or changing in them, and draws them so—the animal in its motion, the tree in its growth, the cloud in its course, the mountain in its wearing away. Try always, whenever you look at a form, to see the lines in it which have had power over its past fate, and will have power over its futurity. Those are its *awful* lines ; see that you seize on those, whatever else you miss. Thus, the leafage in Fig. 16. (p. 73.) grew round the root of a stone pine, on the brow of a crag at Sestri, near Genoa, and all the sprays of it are thrust away in their first budding by the great rude root, and spring out in every direction round it, as water splashes when a heavy stone is thrown into it. Then, when they have got clear of the root, they begin to bend up again ; some of them, being little stone pines themselves, have a great notion of growing upright, if they can ; and this struggle of theirs to recover their straight

road towards the sky, after being obliged to grow sideways in their early years, is the effort that will mainly influence their future destiny, and determine if they are to be crabbed, forky pines, striking from that rock of Sestri, whose clefts nourish them, with bared red lightning of angry arms towards the sea ; or if they are to be goodly and solemn pines, with trunks like pillars of temples, and the purple burning of their branches sheathed in deep globes of cloudy green. Those, then, are their fateful lines ; see that you give that spring and resilience, whatever you leave ungiven : depend upon it, their chief beauty is in these.

So in trees in general and bushes, large or small, you will notice that, though the boughs spring irregularly and at various angles, there is a tendency in all to stoop less and less as they near the top of the tree. This structure, typified in the simplest possible terms at *c*, Fig. 17., is common to all trees, that I know of, and it gives them a certain plummy character, and aspect of unity in the hearts of their branches, which are essential to their beauty.

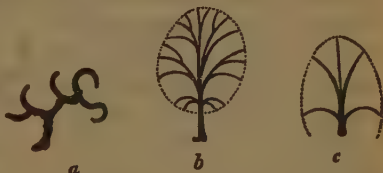


FIG. 17.

The stem does not merely send off a wild branch here and there to take its own way, but all the branches share in one great fountain-like impulse ; each has a curve and a path to take which fills a definite place, and each terminates all its minor branches at its outer extremity, so as to form a great outer curve, whose character and proportion are peculiar for each species ; that is to say, the general type or idea of a tree is not as *a*, Fig. 17., but as *b*, in which, observe, the boughs all carry their minor divisions right out to the bounding curve ; not but that smaller branches, by thousands, terminate in the heart of the tree, but the idea and main purpose in every branch are to carry all its child branches well out to the air and light, and let each of them, however small, take its part in filling the united flow of the bounding curve, so that the type of each separate bough is again not *a*,

but *b*, Fig. 18. ; approximating, that is to say, so far to the structure of a plant of broccoli as to throw the great mass of spray and leafage out to a rounded surface ; therefore, beware



FIG. 18.

of getting into a careless habit of drawing boughs with successive sweeps of the pen or brush, one hanging to the other, as in Fig. 19. If you look at the tree-boughs in any

painting of Wilson's, you will see this structure, and nearly every other that is to be avoided, in their intensest types. You will also notice that Wilson never conceives a tree as a round mass, but flat, as if it had been pressed and dried. Most people, in drawing pines, seem to fancy, in the same way, that the boughs come out only on two sides of the trunk, instead of all round it; always, therefore, take more pains in trying to draw the boughs of trees that grow *towards* you, than those that go off to the sides ; anybody can draw the latter, but the fore-



FIG. 19.

shortened ones are not so easy. It will help you in drawing them to observe that in most trees the ramification of each branch, though not of the tree itself, is more or less flattened, and approximates, in its position, to the look of a hand held out to receive something, or shelter something. If you take a looking-glass, and hold your hand before it slightly hollowed, with the palm upwards, and the fingers open, as if you were going to support the base of some great bowl, larger than you could easily hold, and sketch your hand as you see it in the glass, with the points of the fingers towards you, it will materially help you in understanding the way trees generally hold out their hands ; and if then you will turn yours with its palm downwards, as if you were going to try to hide something, but with the fingers expanded, you will get a good type

of the action of the lower boughs in cedars and such other spreading trees.

Fig. 20. will give you a good idea of the simplest way in



FIG. 20.

which these and other such facts can be rapidly expressed ; if you copy it carefully, you will be surprised to find how the touches all group together, in expressing the plummy toss of the tree branches, and the springing of the bushes out of the bank,

and the undulation of the ground : note the careful drawing of the footsteps made by the climbers of the little mound on the left.* It is facsimilèd from an etching of Turner's, and is as good an example as you can have of the use of pure and firm lines ; it will also show you how the particular action in foliage, or anything else to which you wish to direct attention, may be intensified by the adjuncts. The tall and upright trees are made to look more tall and upright still, because their line is continued below by the figure of the farmer with his stick ; and the rounded bushes on the bank are made to look more rounded because their line is continued in one broad sweep by the black dog and the boy climbing the wall. These figures are placed entirely with this object, as we shall see more fully hereafter when we come to talk about composition ; but, if you please, we will not talk about that yet awhile. What I have been telling you about the beautiful lines and action of foliage has nothing to do with composition, but only with fact, and the brief and expressive representation of fact. But there will be no harm in your looking forward, if you like to do so, to the account, in Letter III. of the "Law of Radiation," and reading what it said there about tree growth : indeed it would in some respects have been better to have said it here than there, only it would have broken up the account of the principles of composition somewhat awkwardly.

Now, although the lines indicative of action are not always quite so manifest in other things as in trees, a little attention will soon enable you to see that there *are* such lines in everything. In an old house roof, a bad observer and bad draughtsman will only see and draw the spotty irregularity of tiles or slates all over ; but a good draughtsman will see all the bends of the under timbers, where they are weakest and the weight is telling on them most, and the tracks of the run of the water in time of rain, where it runs off fastest, and where it lies long and feeds the moss ; and he will be careful, however few slates he draws, to mark the way they bend together towards those hollows (which have the future fate of the roof in them), and crowd gradually together at the top of the gable,

* It is meant, I believe, for "Salt Hill."

partly diminishing in perspective, partly, perhaps, diminished on purpose (they are so in most English old houses) by the slate-layer. So in ground, there is always the direction of the run of the water to be noticed, which rounds the earth and cuts it into hollows ; and, generally, in any bank, or height worth drawing, a trace of bedded or other internal structure besides. The figure 20. will give you some idea of the way in which such facts may be expressed by a few lines. Do you not feel the depression in the ground all down the hill where the foot-steps are, and how the people always turn to the left at the top, losing breath a little, and then how the water runs down in that other hollow towards the valley, behind the roots of the trees ?

Now, I want you in your first sketches from nature to aim exclusively at understanding and representing these vital facts of form ; using the pen—not now the steel, but the quill—firmly and steadily, never scrawling with it, but saying to yourself before you lay on a single touch,—“ *That leaf is the main one, that bough is the guiding one, and this touch, so long, so broad, means that part of it,*”—point or side or knot, as the case may be. Resolve always, as you look at the thing, what you will take, and what miss of it, and never let your hand run away with you, or get into any habit or method of touch. If you want a continuous line, your hand should pass calmly from one end of it to the other, without a tremor ; if you want a shaking and broken line, your hand should shake, or break off, as easily as a musician’s finger shakes or stops on a note : only remember this, that there is no general way of doing *any* thing ; no recipe can be given you for so much as the drawing of a cluster of grass. The grass may be ragged and stiff, or tender and flowing ; sunburnt and sheep-bitten, or rank and languid ; fresh or dry ; lustrous or dull : look at it, and try to draw it as it is, and don’t think how somebody “told you to *do* grass.” So a stone may be round and angular, polished or rough, cracked all over like an ill-glazed teacup, or as united and broad as the breast of Hercules. It may be as flaky as a wafer, as powdery as a field puff-ball ; it may be knotted like a ship’s hawser, or kneaded like hammered iron, or knit like a Danias-

cus sabre, or fused like a glass bottle, or crystallised like a hoar-frost, or veined like a forest leaf: look at it, and don't try to remember how anybody told you to "do a stone."

As soon as you find that your hand obeys you thoroughly, and that you can render any form with a firmness and truth approaching that of Turner's and Durer's work,* you must add a simple but equally careful light and shade to your pen drawing, so as to make each study as complete as possible: for which you must prepare yourself thus. Get, if you have the means, a good impression of one plate of Turner's *Liber Studiorum*; if possible, one of the subjects named in the note below.†

* I do not mean that you can approach Turner or Durer in their strength, that is to say, in their imagination or power of design. But you may approach them, by perseverance, in truth of manner.

† The following are the most desirable plates:

Grande Chartreuse.	Pembury Mill.
Æsacus and Hespérie.	Little Devil's Bridge.
Cephalus and Procris.	River Wye (<i>not</i> Wye and Severn).
Source of Arveron.	Holy Island.
Ben Arthur.	Clyde.
Watermill.	Lauffenbourg.
Hindhead Hill.	Blair Athol.
Hedging and Ditching.	Alps from Grenoble.
Dumblane Abbey.	Raglan. (Subject with quiet brook,
Morpeth.	trees, and castle on the right.)
Calais Pier.	

If you cannot get one of these, any of the others will be serviceable, except only the twelve following, which are quite useless:—

1. Scene in Italy, with goats on a walled road, and trees above.
2. Interior of church.
3. Scene with bridge, and trees above; figures on left, one playing a pipe.
4. Scene with figure playing on tambourine.
5. Scene on Thames with high trees, and a square tower of a church seen through them.
6. Fifth Plague of Egypt.
7. Tenth Plague of Egypt.
8. Rivaulx Abbey.
9. Wye and Severn.
10. Scene with castle in centre, cows under trees on the left.
11. Martello Towers.
12. Calm.

It is very unlikely that you should meet with one of the original etch-

If you cannot obtain, or even borrow for a little while, any of these engravings, you must use a photograph instead (how, I will tell you presently); but, if you can get the Turner, it will be best. You will see that it is composed of a firm etching in line, with mezzotint shadow laid over it. You must first copy the etched part of it accurately; to which end put the print against the window, and trace slowly with the *greatest* care every black line; retrace this on smooth drawing-paper; and, finally, go over the whole with your pen, looking at the original plate always, so that if you err at all, it may be on the right side, not making a line which is too curved or too straight already in the tracing, *more* curved or *more* straight, as you go over it. And in doing this, never work after you are tired, nor to "get the thing done," for if it is badly done, it will be of no use to you. The true zeal and patience of a quarter of an hour are better than the sulky and inattentive labour of a whole day. If you have not made the touches right at the first going over with the pen, retouch them delicately, with little ink in your pen, thickening or rein-

ings; if you should, it will be a drawing-master in itself alone, for it is not only equivalent to a pen-and-ink drawing by Turner, but to a very careful one: only observe, the Source of Arveron, Raglan, and Dumblane were not etched by Turner; and the etchings of those three are not good for separate study, though it is deeply interesting to see how Turner, apparently provoked at the failure of the beginnings in the Arveron and Raglan, took the plates up himself, and either conquered or brought into use the bad etching by his marvellous engraving. The Dumblane was, however, well etched by Mr. Lupton, and beautifully engraved by him. The finest Turner etching is of an aqueduct with a stork standing in a mountain stream, not in the published series; and next to it, are the unpublished etchings of the Via Mala and Crowhurst. Turner seems to have been so fond of these plates that he kept retouching and finishing them, and never made up his mind to let them go. The Via Mala is certainly, in the state in which Turner left it, the finest of the whole series: its etching is, as I said, the best after that of the aqueduct. Figure 20., above, is part of another fine unpublished etching, "Windsor, from Salt Hill." Of the published etchings, the finest are the Ben Arthur, Æsacus, Cephalus, and Stone Pines, with the Girl washing at a Cistern; the three latter are the more generally instructive. Hindhead Hill, Isis, Jason, and Morpeth, are also very desirable.

forcing them as they need : you cannot give too much care to the facsimile. Then keep this etched outline by you, in order to study at your ease the way in which Turner uses his line as preparatory for the subsequent shadow ; * it is only in getting the two separate that you will be able to reason on this. Next, copy once more, though for the fourth time, any part of this etching which you like, and put on the light and shade with the brush, and any brown colour that matches that of the plate ; † working it with the point of the brush as delicately as if you were drawing with pencil, and dotting and cross-hatching as lightly as you can touch the paper, till you get the gradations of Turner's engraving. In this exercise, as in the former one, a quarter of an inch worked to close resemblance of the copy is worth more than the whole subject carelessly done. Not that in drawing afterwards from nature, you are to be obliged to finish every gradation in this way, but that, once having fully accomplished the drawing *something* rightly, you will thenceforward feel and aim at a higher perfection than you could otherwise have conceived, and the brush will obey you, and bring out quickly and clearly the loveliest results, with a submissiveness which it would have wholly refused if you had not put it to severest work. Nothing is more strange in art than the way that chance and materials seem to favour you, when once you have thoroughly conquered them. Make yourself quite independent of chance, get your result in spite of it, and from that day forward all things will somehow fall as you would have them. Show the camel's-hair, and the colour in it, that no bending nor blotting are of any use to escape your will ; that the touch and the shade *shall* finally be right, if it cost you a year's toil ; and from that hour of corrective conviction, said camel's-hair will bend itself to all your wishes, and no blot will dare to transgress its appointed border. If you cannot obtain a print from the *Liber Studiorum*, get a photo-

* You will find more notice of this point in the account of Harding's tree-drawing, a little farther on.

† The impressions vary so much in colour that no brown can be specified.

graph * of some general landscape subject, with high hills and a village, or picturesque town, in the middle distance, and some calm water of varied character (a stream with stones in it, if possible), and copy any part of it you like, in this same brown colour, working, as I have just directed you to do from the *Liber*, a great deal with the point of the brush. You are under a twofold disadvantage here, however; first, there are portions in every photograph too delicately done for you at present to be at all able to copy; and secondly, there are portions always more obscure or dark than there would be in the real scene, and involved in a mystery which you will not be able, as yet, to decipher. Both these characters will be advantageous to you for future study, after you have gained experience, but they are a little against you in early attempts at tinting; still you must fight through the difficulty, and get the power of producing delicate gradations with brown or grey, like those of the photograph.

Now observe; the perfection of work would be tinted shadow, like photography, *without* any obscurity or exaggerated darkness; and as long as your effect depends in anywise on visible *lines*, your art is not perfect, though it may be first-rate of its kind. But to get complete results in tints merely, requires both long time and consummate skill; and you will find that a few well-put pen lines, with a tint dashed over or under them, get more expression of facts than you could reach in any other way, by the same expenditure of time. The use of the *Liber Studiorum* print to you is chiefly as an example of the simplest shorthand of this kind, a shorthand which is yet capable of dealing with the most subtle natural effects; for the firm etching gets at the expression of complicated details, as leaves, masonry, textures of ground, &c., while the overlaid tint enables you to express the most tender distances of sky, and forms of playing light, mist or cloud. Most of the best drawings by the old masters are executed on this principle, the touches of the pen being useful also to give a look of transparency to shadows, which could not otherwise be attained

* You had better get such a photograph, even if you have a *Liber* print as well.

but by great finish of tinting ; and if you have access to any ordinarily good public gallery, or can make friends of any printsellers who have folios of old drawings, or facsimiles of them, you will not be at a loss to find some example of this unity of pen with tinting. Multitudes of photographs also are now taken from the best drawings by the old masters, and I hope that our Mechanics' Institutes, and other societies organized with a view to public instruction, will not fail to possess themselves of examples of these, and to make them accessible to students of drawing in the vicinity ; a single print from Turner's *Liber*, to show the unison of tint with pen etching, and the "St. Catherine," lately photographed by Thurston Thompson, from Raphael's drawing in the Louvre, to show the unity of the soft tinting of the stump with chalk, would be all that is necessary, and would, I believe, be in many cases more serviceable than a larger collection, and certainly than a whole gallery of second-rate prints. Two such examples are peculiarly desirable, because all other modes of drawing, with pen separately, or chalk separately, or colour separately, may be seen by the poorest student in any cheap illustrated book, or in shop windows. But this unity of tinting with line he cannot generally see but by some especial enquiry, and in some out of the way places he could not find a single example of it. Supposing that this should be so in your own case, and that you cannot meet with any example of this kind, try to make the matter out alone, thus :

Take a small and simple photograph ; allow yourself half an hour to express its subjects with the pen only, using some permanent liquid colour instead of ink, outlining its buildings or trees firmly, and laying in the deeper shadows, as you have been accustomed to do in your bolder pen drawings ; then, when this etching is dry, take your sepia or grey, and tint it over, getting now the finer gradations of the photograph ; and finally, taking out the higher lights with penknife or blotting-paper. You will soon find what can be done in this way ; and by a series of experiments you may ascertain for yourself how far the pen may be made serviceable to reinforce shadows,

mark characters of texture, outline unintelligible masses, and so on. The more time you have, the more delicate you may make the pen drawing, blending it with the tint ; the less you have, the more distinct you must keep the two. Practice in this way from one photograph, allowing yourself sometimes only a quarter of an hour for the whole thing, sometimes an hour, sometimes two or three hours ; in each case drawing the whole subject in full depth of light and shade, but with such degree of finish in the parts as is possible in the given time. And this exercise, observe, you will do well to repeat frequently whether you can get prints and drawings as well as photographs, or not.

And now at last, when you can copy a piece of *Liber Studiorum*, or its photographic substitute, faithfully, you have the complete means in your power of working from nature on all subjects that interest you, which you should do in four different ways.

First. When you have full time, and your subject is one that will stay quiet for you, make perfect light and shade studies, or as nearly perfect as you can, with grey or brown colour of any kind, reinforced and defined with the pen.

Secondly. When your time is short, or the subject is so rich in detail that you feel you cannot complete it intelligibly in light and shade, make a hasty study of the effect, and give the rest of the time to a *Dureresque* expression of the details. If the subject seems to you interesting, and there are points about it which you cannot understand, try to get five spare minutes to go close up to it, and make a nearer memorandum ; not that you are ever to bring the details of this nearer sketch into the farther one, but that you may thus perfect your experience of the aspect of things, and know that such and such a look of a tower or cottage at five hundred yards off means *that* sort of tower or cottage near ; while, also, this nearer sketch will be useful to prevent any future misinterpretation of your own work. If you have time, however far your light and shade study in the distance may have been carried, it is always well, for these reasons, to make also your *Dureresque* and your near memoranda ; for if your light and shade draw-

ing be good, much of the interesting detail must be lost in it, or disguised.

Your hasty study of effect may be made most easily and quickly with a soft pencil, dashed over when done with one tolerably deep tone of grey, which will fix the pencil. While this fixing colour is wet, take out the higher lights with the dry brush; and, when it is quite dry, scratch out the highest lights with the penknife. Five minutes, carefully applied, will do much by these means. Of course the paper is to be white. I do not like studies on grey paper so well; for you can get more gradation by the taking off your wet tint, and laying it on cunningly a little darker here and there, than you can with body-colour white, unless you are consummately skilful. There is no objection to your making your Dureresque memoranda on grey or yellow paper, and touching or relieving them with white; only, do not depend much on your white touches, nor make the sketch for their sake.

Thirdly. When you have neither time for careful study nor for Dureresque detail, sketch the outline with pencil, then dash in the shadows with the brush boldly, trying to do as much as you possibly can at once, and to get a habit of expedition and decision; laying more colour again and again into the tints as they dry, using every expedient which your practice has suggested to you of carrying out your chiaroscuro in the manageable and moist material, taking the colour off here with the dry brush, scratching out lights in it there with the wooden handle of the brush, rubbing it in with your fingers, drying it off with your sponge, &c. Then, when the colour is in, take your pen and mark the outline characters vigorously, in the manner of the *Liber Studiorum*. This kind of study is very convenient for carrying away pieces of effect which depend not so much on refinement as on complexity, strange shapes of involved shadows, sudden effects of sky, &c.; and it is most useful as a safeguard against any too servile or slow habits which the minute copying may induce in you; for although the endeavour to obtain velocity merely for velocity's sake, and dash for display's sake, is as baneful as it is despicable; there *are* a velocity and a dash which not only are com-

patible with perfect drawing, but obtain certain results which cannot be had otherwise. And it is perfectly safe for you to study occasionally for speed and decision, while your continual course of practice is such as to ensure your retaining an accurate judgment and a tender touch. Speed, under such circumstances, is rather fatiguing than tempting; and you will find yourself always beguiled rather into elaboration than negligence.

Fourthly. You will find it of great use, whatever kind of landscape scenery you are passing through, to get into the habit of making memoranda of the shapes of shadows. You will find that many objects of no essential interest in them-

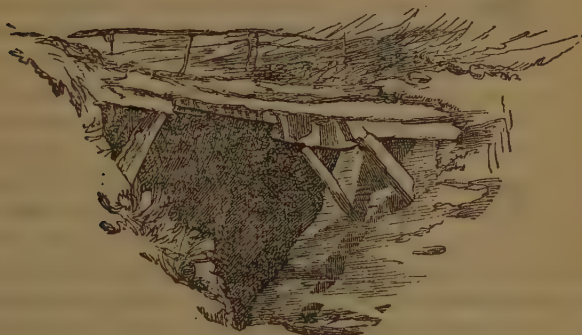
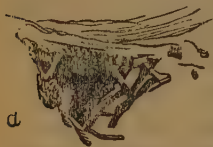


FIG. 21.

selves, and neither deserving a finished study, nor a Dureresque one, may yet become of singular value in consequence of the fantastic shapes of their shadows; for it happens often, in distant effect, that the shadow is by much a more important element than the substance. Thus, in the Alpine bridge, Fig. 21., seen within a few yards of it, as in the figure, the arrangement of timbers to which the shadows are owing is perceptible; but at half a mile's distance, in bright sunlight, the timbers would not be seen; and a good painter's expression of the bridge would be merely the large spot, and the crossed bars, of pure grey; wholly without indication of their

cause, as in Fig. 22. *a* ; and if we saw it at still greater distances, it would appear, as in Fig. 22. *b* and *c*, diminishing at last to a strange, unintelligible, spider-like spot of grey on the light hill-side.



d

A perfectly great painter, throughout his distances, continually reduces his objects to these shadow abstracts ; and the singular, and to many persons unaccountable, effect of the confused touches in Turner's distances, is owing chiefly to this thorough accuracy and intense meaning of the shadow abstracts.

b



c



FIG. 22.

Studies of this kind are easily made when you are in haste, with an F. or HB. pencil : it requires some hardness of the point to ensure your drawing delicately enough when the forms of the shadows are very subtle ; they are sure to be so somewhere, and are generally so everywhere. The pencil is indeed a very precious instrument after you are master of the pen and brush, for the pencil, cunningly used, is both, and will draw a line with the precision of the one and the gradation of the other ; nevertheless, it is so unsatisfactory to see the sharp touches, on which the best of the detail depends, getting gradually deadened by time, or to find the places where force was wanted look shiny, and like a fire-grate, that I should recommend rather the steady use of the pen, or brush, and colour, whenever time admits of it ; keeping only a small memorandum-book in the breast-pocket, with its well-cut, sheathed pencil, ready for notes on passing opportunities : but never being without this.

Thus much, then, respecting the *manner* in which you are at first to draw from nature. But it may perhaps be serviceable to you, if I also note one or two points respecting your *choice* of subjects for study, and the best special methods of treating some of them ; for one of by no means the least difficulties which you have at first to encounter is a peculiar instinct, common, as far as I have noticed, to all beginners, to

fix on exactly the most unmanageable feature in the given scene. There are many things in every landscape which can be drawn, if at all, only by the most accomplished artists ; and I have noticed that it is nearly always these which a beginner will dash at ; or, if not these, it will be something which, though pleasing to him in itself, is unfit for a picture, and in which, when he has drawn it, he will have little pleasure. As some slight protection against this evil genius of beginners, the following general warnings may be useful :

1. Do not draw things that you love, on account of their associations ; or at least do not draw them because you love them ; but merely when you cannot get anything else to draw. If you try to draw places that you love, you are sure to be always entangled amongst neat brick walls, iron railings, gravel walks, greenhouses, and quickset hedges ; besides that you will be continually led into some endeavour to make your drawing pretty, or complete, which will be fatal to your progress. You need never hope to get on, if you are the least anxious that the drawing you are actually at work upon should look nice when it is done. All you have to care about is to make it *right*, and to learn as much in doing it as possible. So then, though when you are sitting in your friend's parlour, or in your own, and have nothing else to do, you may draw any thing that is there, for practice ; even the fire-irons or the pattern on the carpet : be sure that it is for practice, and not because it is a beloved carpet, nor a friendly poker and tongs, nor because you wish to please your friend by drawing her room.

Also, never make presents of your drawings. Of course I am addressing you as a *beginner*—a time may come when your work will be precious to everybody ; but be resolute not to give it away till you know that it is worth something (as soon as it is worth anything you will know that it is so). If any one asks you for a present of a drawing, send them a couple of cakes of colour and a piece of Bristol board : those materials are, for the present, of more value in that form than if you had spread the one over the other.

The main reason for this rule is, however, that its observ-

ance will much protect you from the great danger of trying to make your drawings pretty.

2. Never, by choice, draw anything polished ; especially if complicated in form. Avoid all brass rods and curtain ornaments, chandeliers, plate, glass, and fine steel. A shining knob of a piece of furniture does not matter if it comes in your way ; but do not fret yourself if it will not look right, and choose only things that do not shine.

3. Avoid all very neat things. They are exceedingly difficult to draw, and very ugly when drawn. Choose rough, worn, and clumsy-looking things as much as possible ; for instance, you cannot have a more difficult or profitless study than a newly-painted Thames wherry, nor a better study than an old empty coal-barge, lying ashore at low-tide : in general, everything that you think very ugly will be good for you to draw.

4. Avoid, as much as possible, studies in which one thing is seen *through* another. You will constantly find a thin tree standing before your chosen cottage, or between you and the turn of the river ; its near branches all entangled with the distance. It is intensely difficult to represent this ; and though, when the tree is there, you must not imaginarily cut it down, but do it as well as you can, yet always look for subjects that fall into definite masses, not into network ; that is, rather for a cottage with a dark tree *beside* it, than for one with a thin tree in front of it ; rather for a mass of wood, soft, blue, and rounded, than for a ragged copse, or confusion of intricate stems.

5. Avoid, as far as possible, country divided by hedges. Perhaps nothing in the whole compass of landscape is so utterly unpicturesque and unmanageable as the ordinary English patchwork of field and hedge, with trees dotted over it in independent spots, gnawed straight at the cattle line.

Still, do not be discouraged if you find you have chosen ill, and that the subject overmasters you. It is much better that it should, than that you should think you had entirely mastered it. But at first, and even for some time, you must be pre-

pared for very uncomfortable failure ; which, nevertheless, will not be without some wholesome result.

As, however, I have told you what most definitely to avoid, I may, perhaps, help you a little by saying what to seek. In general, all *banks* are beautiful things, and will reward work better than large landscapes. If you live in a lowland country, you must look for places where the ground is broken to the river's edges, with decayed posts, or roots of trees ; or, if by great good luck there should be such things within your reach, for remnants of stone quays or steps, mossy mill-dams, &c. Nearly every other mile of road in chalk country will present beautiful bits of broken bank at its sides ; better in form and colour than high chalk cliffs. In woods, one or two trunks, with the flowery ground below, are at once the richest and easiest kind of study : a not very thick trunk, say nine inches or a foot in diameter, with ivy running up it sparingly, is an easy, and always a rewarding subject.

Large nests of buildings in the middle distance are always beautiful, when drawn carefully, provided they are not modern rows of pattern cottages, or villas with Ionic and Doric porticos. Any old English village, or cluster of farm-houses, drawn with all its ins and outs, and haystacks, and palings, is sure to be lovely ; much more a French one. French landscape is generally as much superior to English as Swiss landscape is to French ; in some respects, the French is incomparable. Such scenes as that avenue on the Seine, which I have recommended you to buy the engraving of, admit no rivalry in their expression of graceful rusticity and cheerful peace, and in the beauty of component lines.

In drawing villages, take great pains with the gardens ; a rustic garden is in every way beautiful. If you have time, draw all the rows of cabbages, and hollyhocks, and broken fences, and wandering eglantines, and bossy roses : you cannot have better practice, nor be kept by anything in purer thoughts.

Make intimate friends of all the brooks in your neighbourhood, and study them ripple by ripple.

Village churches in England are not often good subjects ;

there is a peculiar meanness about most of them, and awkwardness of line. Old manor-houses are often pretty. Ruins are usually, with us, too prim, and cathedrals too orderly. I do not think there is a single cathedral in England from which it is possible to obtain *one* subject for an impressive drawing. There is always some discordant civility, or jarring vergerism about them.

If you live in a mountain or hill country, your only danger is redundancy of subject. Be resolved, in the first place, to draw a piece of rounded rock, with its variegated lichens, quite rightly, getting its complete roundings, and all the patterns of the lichen in true local colour. Till you can do this, it is of no use your thinking of sketching among hills; but when once you have done this, the forms of distant hills will be comparatively easy.

When you have practised for a little time from such of these subjects as may be accessible to you, you will certainly find difficulties arising which will make you wish more than ever for a master's help: these difficulties will vary according to the character of your own mind (one question occurring to one person, and one to another), so that it is impossible to anticipate them all; and it would make this too large a book if I answered all that I *can* anticipate; you must be content to work on, in good hope that nature will, in her own time, interpret to you much for herself; that farther experience on your own part will make some difficulties disappear; and that others will be removed by the occasional observation of such artists' work as may come in your way. Nevertheless, I will not close this letter without a few general remarks, such as may be useful to you after you are somewhat advanced in power; and these remarks may, I think, be conveniently arranged under three heads, having reference to the drawing of vegetation, water, and skies.

And, first, of vegetation. You may think, perhaps, we have said enough about trees already; yet if you have done as you were bid, and tried to draw them frequently enough, and carefully enough, you will be ready by this time to hear a little more of them. You will also recollect that we left our

question, respecting the mode of expressing intricacy of leafage, partly unsettled in the first letter. I left it so because I wanted you to learn the real structure of leaves, by drawing them for yourself, before I troubled you with the most subtle considerations as to *method* in drawing them. And by this time, I imagine, you must have found out two principal things, universal facts, about leaves; namely, that they always, in the main tendencies of their lines, indicate a beautiful divergence of growth, according to the law of radiation, already referred to;* and the second, that this divergence is never formal, but carried out with endless variety of individual line. I must now press both these facts on your attention a little farther.

You may perhaps have been surprised that I have not yet spoken of the works of J. D. Harding, especially if you happen to have met with the passages referring to them in "Modern Painters," in which they are highly praised. They are deservedly praised, for they are the only works by a modern draughtsman which express in any wise the energy of trees, and the laws of growth, of which we have been speaking. There are no lithographic sketches which, for truth of general character, obtained with little cost of time, at all rival Harding's. Calame, Robert, and the other lithographic landscape sketchers are altogether inferior in power, though sometimes a little deeper in meaning. But you must not take even Harding for a model, though you may use his works for occasional reference; and if you can afford to buy his "Lessons on Trees,"† it will be serviceable to you in various ways, and will at present help me to explain the point under consideration. And it is well that I should illustrate this point by reference to Harding's works, because their great influence on young students renders it desirable that their real character should be thoroughly understood.

* See the closing letter in this volume.

† Bogue, Fleet Street. If you are not acquainted with Harding's works (an unlikely supposition, considering their popularity), and cannot meet with the one in question, the diagrams given here will enable you to understand all that is needful for our purposes.

You will find, first, in the title-page of the "*Lessons on Trees*," a pretty woodcut, in which the tree stems are drawn with great truth, and in a very interesting arrangement of lines. Plate 1. is not quite worthy of Mr. Harding, tending too much to make his pupil, at starting, think everything depends on black dots; still the main lines are good, and very characteristic of tree growth. Then, in Plate 2., we come to the point at issue. The first examples in that plate are given to the pupil that he may practise from them till his hand gets into the habit of arranging lines freely in a similar manner; and they are stated by Mr. Harding to be universal in application; "all outlines expressive of foliage," he says, "are but modifications of them." They consist of groups of lines, more or less resembling our Fig. 23. ; and the characters es-



FIG. 23.

pecially insisted upon are, that they "tend at their inner ends to a common centre;" that "their ends terminate in [are enclosed by] ovoid curves;" and that "the outer ends are most emphatic."

Now, as thus expressive of the great laws of radiation and enclosure, the main principle of this method of execution confirms, in a very interesting way, our conclusions respecting foliage composition. The reason of the last rule, that the outer end of the line is to be most emphatic, does not indeed at first appear; for the line at one end of a natural leaf is not more emphatic than the line at the other: but ultimately, in Harding's method, this darker part of the touch stands more or less for the shade at the outer extremity of the leaf mass; and, as Harding uses these touches, they express as much of tree character as any mere habit of touch *can* express. But, unfortunately, there is another law of tree growth, quite as fixed as the law of radiation, which this and all other conventional modes of execution wholly lose sight of. This second law is, that the radiating tendency shall be carried out only as a ruling spirit in reconciliation with perpetual individual caprice on the part of the separate leaves. So that the moment a touch is monotonous, it must be also false, the liberty

of the leaf individually being just as essential a truth, as its unity of growth with its companions in the radiating group.

It does not matter how small or apparently symmetrical the cluster may be, nor how large or vague. You can hardly have a more formal one than *b* in Fig. 9. p. 58., nor a less formal one than this shoot of Spanish chestnut, shedding its leaves, Fig. 24. ; but in either of them, even the general reader, unpractised in any of the previously recommended exercises, must see that there are wandering lines mixed with the



FIG. 24.

radiating ones, and radiating lines with the wild ones : and if he takes the pen and tries to copy either of these examples, he will find that neither play of hand to left nor to right, neither a free touch nor a firm touch, nor any learnable or describable touch whatsoever, will enable him to produce, currently, a resemblance of it ; but that he must either draw it slowly, or give it up. And (which makes the matter worse still) though gathering the bough, and putting it close to you, or seeing a piece of near foliage against the sky, you may draw the entire outline of the leaves, yet if the spray has light upon it, and is ever so little a way off, you will miss, as we have seen, a point of a leaf here, and an edge there ; some of the surfaces will be confused by glitter, and some spotted with shade ; and if you look carefully through this confusion for the edges or dark stems which you really *can see*, and put only those down, the result will be neither like Fig. 9. nor Fig. 24., but such an interrupted and puzzling piece of work as Fig. 25.*

* I draw this figure (a young shoot of oak) in outline only, it being impossible to express the refinements of shade in distant foliage in a woodcut.

Now, it is in the perfect acknowledgment and expression of these *three* laws that all good drawing of landscape consists. There is, first, the organic unity; the law, whether of radiation, or parallelism, or concurrent action, which rules the masses of herbs and trees, of rocks, and clouds, and waves; secondly, the individual liberty of the members subjected to these laws of unity; and, lastly, the mystery under which the separate character of each is more or less concealed.

I say, first, there must be observance of the ruling organic law. This is the first distinction between good artists and bad artists. Your common sketcher or bad painter puts his leaves on the trees as if they were moss tied to sticks; he cannot see the lines of action or growth; he scatters the shapeless clouds over his sky, not perceiving the sweeps of associated curves



FIG. 25.

which the real clouds are following as they fly; and he breaks his mountain side into rugged fragments, wholly unconscious of the lines of force with which the real rocks have risen, or of the lines of couch in which they repose. On the contrary, it is the main delight of the great draughtsman to trace these laws of government; and his tendency to error is always in the exaggeration of their authority rather than in its denial.

Secondly, I say, we have to show the individual character and liberty of the separate leaves, clouds, or rocks. And herein the great masters separate themselves finally from the inferior ones; for if the men of inferior genius ever express law at all, it is by the sacrifice of individuality. Thus, Salvator Rosa has great perception of the sweep of foliage and rolling of clouds, but never draws a single leaflet or mist

wreath accurately. Similarly, Gainsborough, in his landscape, has great feeling for masses of form and harmony of colour ; but in the detail gives nothing but meaningless touches ; not even so much as the species of tree, much less the variety of its leafage, being ever discernable. Now, although both these expressions of government and individuality are essential to masterly work, the individuality is the *more* essential, and the more difficult of attainment ; and, therefore, that attainment separates the great masters *finally* from the inferior ones. It is the more essential, because, in these matters of beautiful arrangement in visible things, the same rules hold that hold in moral things. It is a lamentable and unnatural thing to see a number of men subject to no government, actuated by no ruling principle, and associated by no common affection : but it would be a more lamentable thing still, were it possible to see a number of men so oppressed into assimilation as to have no more any individual hope or character, no differences in aim, no dissimilarities of passion, no irregularities of judgment ; a society in which no man could help another, since none would be feebler than himself ; no man admire another, since none would be stronger than himself ; no man be grateful to another, since by none he could be relieved ; no man reverence another, since by none he could be instructed ; a society in which every soul would be as the syllable of a stammerer instead of the word of a speaker, in which every man would walk as in a frightful dream, seeing spectres of himself, in everlasting multiplication, gliding helplessly around him in a speechless darkness. Therefore it is that perpetual difference, play, and change in groups of form are more essential to them even than their being subdued by some great gathering law : the law is needful to them for their perfection and their power, but the difference is needful to them for their *life*.

And here it may be noted in passing, that if you enjoy the pursuit of analogies and types, and have any ingenuity of judgment in discerning them, you may always accurately ascertain what are the noble characters in a piece of painting, by merely considering what are the noble characters of man in his association with his fellows. What grace of

manner and refinement of habit are in society, grace of line and refinement of form are in the association of visible objects. What advantage or harm there may be in sharpness, ruggedness, or quaintness in the dealings or conversations of men ; precisely that relative degree of advantage or harm there is in them as elements of pictorial composition. What power is in liberty or relaxation to strengthen or relieve human souls ; that power, precisely in the same relative degree, play and laxity of line have to strengthen or refresh the expression of a picture. And what goodness or greatness we can conceive to arise in companies of men, from chastity of thought, regularity of life, simplicity of custom, and balance of authority ; precisely that kind of goodness and greatness may be given to a picture by the purity of its colour, the severity of its forms, and the symmetry of its masses.

You need not be in the least afraid of pushing these analogies too far. They cannot be pushed too far ; they are so precise and complete, that the farther you pursue them, the clearer, the more certain, the more useful you will find them. They will not fail you in one particular, or in any direction of enquiry. There is no moral vice, no moral virtue, which has not its *precise* prototype in the art of painting ; so that you may at your will illustrate the moral habit by the art, or the art by the moral habit. Affection and discord, fretfulness and quietness, feebleness and firmness, luxury and purity, pride and modesty, and all other such habits, and every conceivable modification and mingling of them, may be illustrated, with mathematical exactness, by conditions of line and colour ; and not merely these definable vices and virtues, but also every conceivable shade of human character and passion, from the righteous or unrighteous majesty of the king, to the innocent or faultful simplicity of the shepherd boy.

The pursuit of this subject belongs properly, however, to the investigation of the higher branches of composition, matters which it would be quite useless to treat of in this book ; and I only allude to them here, in order that you may understand how the utmost nobleness of art are concerned in this minute work, to which I have set you in your beginning of it.

For it is only by the closest attention, and the most noble execution, that it is possible to express these varieties of individual character, on which all excellence of portraiture depends, whether of masses of mankind, or of groups of leaves.

Now you will be able to understand, among other matters, wherein consists the excellence, and wherein the shortcoming, of the tree-drawing of Harding. It is excellent in so far as it fondly observes, with more truth than any other work of the kind, the great laws of growth and action in trees: it fails—and observe, not in a minor, but in a principal point—because it cannot rightly render any one individual detail or incident of foliage. And in this it fails, not from mere carelessness or incompleteness, but of necessity; the true drawing of detail being for evermore *impossible* to a hand which has contracted a *habit* of execution. The noble draughtsman draws a leaf, and stops, and says calmly—That leaf is of such and such a character; I will give him a friend who will entirely suit him: then he considers what his friend ought to be, and having determined, he draws his friend. This process may be as quick as lightning when the master is great—one of the sons of the giants; or it may be slow and timid: but the process is always gone through; no touch or form is ever added to another by a good painter without a mental determination and affirmation. But when the hand has got into a habit, leaf No. 1. necessitates leaf No. 2.; you cannot stop, your hand is as a horse with the bit in its teeth; or rather is, for the time, a machine, throwing out leaves to order and pattern, all alike. You must stop that hand of yours, however painfully; make it understand that it is not to have its own way any more, that it shall never more slip from one touch to another without orders; otherwise it is not you who are the master, but your fingers. You may therefore study Harding's drawing, and take pleasure in it;* and you may properly admire the dexterity which applies the habit of the hand so

* His lithographic sketches, those, for instance, in the Park and the Forest, and his various lessons on foliage, possess greater merit than the more ambitious engravings in his "Principles and Practice of Art." There are many useful remarks, however, dispersed through this latter work.

well, and produces results on the whole so satisfactory : but you must never copy it, otherwise your progress will be at once arrested. The utmost you can ever hope to do, would be a sketch in Harding's manner, but of far inferior dexterity ; for he has given his life's toil to gain his dexterity, and you, I suppose, have other things to work at besides drawing. You would also incapacitate yourself from ever understanding what truly great work was, or what Nature was ; but by the earnest and complete study of facts, you will gradually come to understand the one and love the other more and more, whether you can draw well yourself or not.

I have yet to say a few words respecting the third law above stated, that of mystery ; the law, namely, that nothing is ever seen perfectly, but only by fragments, and under various conditions of obscurity.* This last fact renders the visible objects of Nature complete as a type of the human nature. We have, observe, first, Subordination ; secondly, Individuality ; lastly, and this not the least essential character, Incomprehensibility ; a perpetual lesson in every serrated point and shining vein which escape or deceive our sight among the forest leaves, how little we may hope to discern clearly, or judge justly, the rents and veins of the human heart ; how much of all that is round us, in men's actions or spirits, which we at first think we understand, a closer and more loving watchfulness would show to be full of mystery, never to be either fathomed or withdrawn.

The expression of this final character in landscape has never been completely reached by any except Turner ; nor can you hope to reach it at all until you have given much time to the practice of art. Only try always when you are sketching any object with a view to completion in light and shade, to draw only those parts of it which you really see definitely ; *preparing* for the after development of the forms by chiaroscuro. It is this preparation by isolated touches for a future arrangement of superimposed light and shade which renders the etchings of the *Liber Studiorum* so inestimable as examples and so

* On this law you will do well, if you can get access to it, to look at the fourth chapter of the fourth volume of "Modern Painters."

peculiar. The character exists more or less in them exactly in proportion to the pains that Turner has taken. Thus the *Æsacus* and *Hespérie* was wrought out with the greatest possible care; and the principal branch on the near tree is etched as in Fig. 26. The work looks at first like a scholar's instead of a master's; but when the light and shade are added, every touch falls into its place, and a perfect expression of grace and complexity results. Nay even before the light and shade are added, you ought to be able to see that these irregular and broken lines, especially where the expression is given of the way the stem loses itself in the leaves, are more true than the monotonous though graceful leaf-drawing which, before Turner's time, had been employed, even by the best masters, in their distant masses. Fig. 27. is sufficiently characteristic of the manner of the old woodcuts after Titian; in which, you see, the leaves are too much of one shape, like



FIG. 26.



FIG. 27.

bunches of fruit; and the boughs too completely seen, besides being somewhat soft and leathery in aspect, owing to the want of angles in their outline. By great men like Titian, this somewhat conventional structure was only given in haste to distant masses; and their exquisite delineation of the foreground, kept their

conventionalism from degeneracy: but in the drawing of the Caracci and other derivative masters, the conventional-

ism prevails everywhere, and sinks gradually into scrawled work, like Fig. 28., about the worst which it is possible to get into the habit of using, though an ignorant person might perhaps suppose it more “free,” and therefore better than Fig. 26. Note, also, that in noble outline drawing, it does not



FIG. 28.

follow that a bough is wrongly drawn, because it looks contracted unnaturally somewhere, as in Fig. 26., just above the foliage. Very often the muscular action which is to be expressed by the line, runs into the *middle* of the branch, and the actual outline of the branch at that place may be dimly seen, or not at all; and it is then only by the future shade that its actual shape, or the cause of its disappearance, will be indicated.

One point more remains to be noted about trees, and I

have done. In the minds of our ordinary water-colour artists, a distant tree seems only to be conceived as a flat green blot, grouping pleasantly with other masses, and giving cool colour to the landscape, but differing nowise, in *texture*, from the blots of other shapes, which these painters use to express stones, or water, or figures. But as soon as you have drawn trees carefully a little while, you will be impressed, and impressed more strongly the better you draw them, with the idea of their *softness* of surface. A distant tree is not a flat and even piece of colour, but a more or less globular mass of a downy or bloomy texture, partly passing into a misty vagueness. I find, practically, this lovely softness of far-away trees the most difficult of all characters to reach, because it cannot be got by mere scratching or roughening the surface, but is always associated with such delicate expressions of form and growth as are only imitable by very careful drawing. The penknife

passed lightly *over* this careful drawing, will do a good deal ; but you must accustom yourself, from the beginning, to aim much at this softness in the lines of the drawing itself, by crossing them delicately, and more or less effacing and confusing the edges. You must invent, according to the character of tree, various modes of execution adapted to express its texture ; but always keep this character of softness in your mind and in your scope of aim ; for in most landscapes it is the intention of nature that the tenderness and transparent infinitude of her foliage should be felt, even at the far distance, in the most distinct opposition to the solid masses and flat surfaces of rocks or buildings.

II. We were, in the second place, to consider a little the modes of representing water, of which important feature of landscape I have hardly said anything yet.

Water is expressed, in common drawings, by conventional lines, whose horizontality is supposed to convey the idea of its surface. In paintings, white dashes or bars of light are used for the same purpose.

But these and all other such expedients are vain and absurd. A piece of calm water always contains a picture in itself, an exquisite reflection of the objects above it. If you give the time necessary to draw these reflections, disturbing them here and there as you see the breeze or current disturb them, you will get the effect of the water ; but if you have not patience to draw the reflections, no expedient will give you a true effect. The picture in the pool needs nearly as much delicate drawing as the picture above the pool ; except only that if there be the least motion on the water, the horizontal lines of the images will be diffused and broken, while the vertical ones will remain decisive, and the oblique ones decisive in proportion to their steepness.

A few close studies will soon teach you this : the only thing you need to be told is to watch carefully the lines of *disturbance* on the surface, as when a bird swims across it, or a fish rises, or the current plays round a stone, reed, or other obstacle. Take the greatest pains to get the *curves* of these

lines true ; the whole value of your careful drawing of the reflections may be lost by your admitting a single false curve of ripple from a wild duck's breast. And (as in other subjects) if you are dissatisfied with your result, always try for more unity and delicacy : if your reflections are only soft and graduated enough, they are nearly sure to give you a pleasant effect. When you are taking pains, work the softer reflections, where they are drawn out by motion in the water, with touches as nearly horizontal as may be ; but when you are in a hurry, indicate the place and play of the images with vertical lines. The actual *construction* of a calm elongated reflection is with horizontal lines : but it is often impossible to draw the descending shades delicately enough with a horizontal touch ; and it is best always when you are in a hurry, and sometimes when you are not, to use the vertical touch. When the ripples are large, the reflections become shaken, and must be drawn with bold undulatory descending lines.

I need not, I should think, tell you that it is of the greatest possible importance to draw the curves of the shore rightly. Their perspective is, if not more subtle, at least more stringent than that of any other lines in Nature. It will not be detected by the general observer, if you miss the curve of a branch, or the sweep of a cloud, or the perspective of a building ;* but every intelligent spectator will feel the difference between a rightly drawn bend of shore or shingle, and a false one. *Absolutely* right, in difficult river perspectives seen from heights, I believe no one but Turner ever has been yet ; and observe, there is no rule for them. To develop the curve mathematically would require a knowledge of the exact quantity of water in the river, the shape of its bed, and the hardness of the rock or shore ; and even with these data, the problem would be one which no mathematician could solve but approximatively. The instinct of the eye can do it ; nothing else.

If, after a little study from Nature, you get puzzled by the

* The student may hardly at first believe that the perspective of buildings is of little consequence : but he will find it so ultimately. See the remarks on this point in the Preface.

great differences between the aspect of the reflected image and that of the object casting it ; and if you wish to know the law of reflection, it is simply this : Suppose all the objects above the water *actually* reversed (not in appearance, but in fact) beneath the water, and precisely the same in form and in relative position, only all topsy-turvy. Then, whatever you can see, from the place in which you stand, of the solid objects so reversed under the water, you will see in the reflection, always in the true perspective of the solid objects so reversed.

If you cannot quite understand this in looking at water, take a mirror, lay it horizontally on the table, put some books and papers upon it, and draw them and their reflections ; moving them about, and watching how their reflections alter, and chiefly how their reflected colours and shades differ from their own colours and shades, by being brought into other oppositions. This difference in chiaroscuro is a more important character in water painting than mere difference in form.

When you are drawing shallow or muddy water, you will see shadows on the bottom, or on the surface, continually modifying the reflections ; and in a clear mountain stream, the most wonderful complications of effect resulting from the shadows and reflections of the stones in it, mingling with the aspect of the stones themselves seen through the water. Do not be frightened at the complexity ; but, on the other hand, do not hope to render it hastily. Look at it well, making out everything that you see, and distinguishing each component part of the effect. There will be, first, the stones seen through the water, distorted always by refraction, so that if the general structure of the stone shows straight parallel lines above the water, you may be sure they will be bent where they enter it ; then the reflection of the part of the stone above the water crosses and interferes with the part that is seen through it, so that you can hardly tell which is which ; and wherever the reflection is darkest, you will see through the water best, and *vice versâ*. Then the real shadow of the stone crosses both these images, and where that shadow falls, it makes the water more reflective, and where the sunshine falls, you will

see more of the surface of the water, and of any dust or motes that may be floating on it : but whether you are to see, at the same spot, most of the bottom of the water, or of the reflection of the objects above, depends on the position of the eye. The more you look down into the water, the better you see objects through it ; the more you look along it, the eye being low, the more you see the reflection of objects above it. Hence the colour of a given space of surface in a stream will entirely change while you stand still in the same spot, merely as you stoop or raise your head ; and thus the colours with which water is painted are an indication of the position of the spectator, and connected inseparably with the perspective of the shores. The most beautiful of all results that I know in mountain streams is when the water is shallow, and the stones at the bottom are rich reddish-orange and black, and the water is seen at an angle which exactly divides the visible colours between those of the stones and that of the sky, and the sky is of clear, full blue. The resulting purple obtained by the blending of the blue and the orange-red, broken by the play of innumerable gradations in the stones, is indescribably lovely.

All this seems complicated enough already ; but if there be a strong colour in the clear water itself, as of green or blue in the Swiss lakes, all these phenomena are doubly involved ; for the darker reflections now become of the colour of the water. The reflection of a black gondola, for instance, at Venice, is never black, but pure dark green. And, farther, the colour of the water itself is of three kinds : one, seen on the surface, is a kind of milky bloom ; the next is seen where the waves let light through them, at their edges ; and the third, shown as a change of colour on the objects seen through the water. Thus, the same wave that makes a white object look of a clear blue, when seen through it, will take a red or violet-coloured bloom on its surface, and will be made pure emerald green by transmitted sunshine through its edges. With all this, however, you are not much concerned at present, but I tell it you partly as a preparation for what we have afterwards to say about colour, and partly that you may ap-

proach lakes and streams with reverence, and study them as carefully as other things, not hoping to express them by a few horizontal dashes of white, or a few tremulous blots.* Not but that much may be done by tremulous blots, when you know precisely what you mean by them, as you will see by many of the Turner sketches, which are now framed at the National Gallery ; but you must have painted water many and many a day—yes, and all day long—before you can hope to do anything like those.

III. Lastly. You may perhaps wonder why, before passing to the clouds, I say nothing special about *ground*.† But there is too much to be said about that to admit of my saying it here. You will find the principal laws of its structure examined at length in the fourth volume of “Modern Painters ;” and if you can get that volume, and copy carefully Plate 21., which I have etched after Turner with great pains, it will give you as much help as you need in the linear expression of ground-surface. Strive to get the retirement and succession of masses in irregular ground : much may be done in this way by careful watching of the perspective diminutions of its herbage, as well as by contour ; and much also by shadows. If you draw the shadows of leaves and tree trunks on any undulating ground with entire carefulness, you will be surprised to find how much they explain of the form and distance of the earth on which they fall.

Passing then to skies, note that there is this great peculiarity about sky subject, as distinguished from earth subject ;—

* It is a useful piece of study to dissolve some Prussian blue in water, so as to make the liquid definitely blue : fill a large white basin with the solution, and put anything you like to float on it, or lie in it ; walnut shells, bits of wood, leaves of flowers, &c. Then study the effects of the reflections, and of the stems of the flowers or submerged portions of the floating objects, as they appear through the blue liquid ; noting especially how, as you lower your head and look along the surface, you see the reflections clearly ; and how, as you raise your head, you lose the reflections, and see the submerged stems clearly.

† Respecting Architectural Drawing, see the notice of the works of Prout in the Appendix.

that the clouds, not being much liable to man's interference, are always beautifully arranged. You cannot be sure of this in any other features of landscape. The rock on which the effect of a mountain scene especially depends is always precisely that which the roadmaker blasts or the landlord quarries; and the spot of green which Nature left with a special purpose by her dark forest sides, and finished with her most delicate grasses, is always that which the farmer ploughs or builds upon. But the clouds, though we can hide them with smoke, and mix them with poison, cannot be quarried nor built over, and they are always therefore gloriously arranged; so gloriously, that unless you have notable powers of memory you need not hope to approach the effect of any sky that interests you. For both its grace and its glow depend upon the united influence of every cloud within its compass: they all move and burn together in a marvellous harmony; not a cloud of them is out of its appointed place, or fails of its part in the choir: and if you are not able to recollect (which in the case of a complicated sky it is impossible you should) precisely the form and position of all the clouds at a given moment, you cannot draw the sky at all; for the clouds will not fit if you draw one part of them three or four minutes before another. You must try therefore to help what memory you have, by sketching at the utmost possible speed the whole range of the clouds; marking, by any shorthand or symbolic work you can hit upon, the peculiar character of each, as transparent, or fleecy, or linear, or undulatory; giving afterwards such completion to the parts as your recollection will enable you to do. This, however, only when the sky is interesting from its general aspect; at other times, do not try to draw all the sky, but a single cloud: sometimes a round cumulus will stay five or six minutes quite steady enough to let you mark out his principal masses: and one or two white or crimson lines which cross the sunrise will often stay without serious change for as long. And in order to be the readier in drawing them, practise occasionally drawing lumps of cotton, which will teach you better than any other stable thing the kind of softness there is in clouds. For you will find when

you have made a few genuine studies of sky, and then look at any ancient or modern painting, that ordinary artists have always fallen into one of two faults: either, in rounding the clouds, they make them as solid and hard-edged as a heap of stones tied up in a sack, or they represent them not as rounded at all, but as vague wreaths of mist or flat lights in the sky; and think they have done enough in leaving a little white paper between dashes of blue, or in taking an irregular space out with the sponge. Now clouds are not as solid as flour-sacks; but, on the other hand, they are neither spongy nor flat. They are definite and very beautiful forms of sculptured mist; sculptured is a perfectly accurate word; they are not more *drifted* into form than they are *carved* into form, the warm air around them cutting them into shape by absorbing the visible vapour beyond certain limits; hence their angular and fantastic outlines, as different from a swollen, spherical, or globular formation, on the one hand, as from that of flat films or shapeless mists on the other. And the worst of all is, that while these forms are difficult enough to draw on any terms, especially considering that they never stay quiet, they must be drawn also at greater disadvantage of light and shade than any others, the force of light in clouds being wholly unattainable by art; so that if we put shade enough to express their form as positively as it is expressed in reality, we must make them painfully too dark on the dark sides. Nevertheless, they are so beautiful, if you in the least succeed with them, that you will hardly, I think, lose courage. Outline them often with the pen, as you can catch them here and there; one of the chief uses of doing this will be, not so much the memorandum so obtained as the lesson you will get respecting the softness of the cloud-outlines. You will always find yourself at a loss to see where the outline really is; and when drawn it will always look hard and false, and will assuredly be either too round or too square, however often you alter it, merely passing from the one fault to the other and back again, the real cloud striking an inexpressible mean between roundness and squareness in all its coils or battlements. I speak at present, of course, only of the cumulus cloud: the

lighter wreaths and flakes of the upper sky cannot be outlined; —they can only be sketched, like locks of hair, by many lines of the pen. Firmly developed bars of cloud on the horizon are in general easy enough, and may be drawn with decision. When you have thus accustomed yourself a little to the placing and action of clouds, try to work out their light and shade, just as carefully as you do that of other things, looking *exclusively* for examples of treatment to the vignettes in Rogers's Italy and Poems, and to the Liber Studiorum, unless you have access to some examples of Turner's own work. No other artist ever yet drew the sky: even Titian's clouds, and Tintoret's, are conventional. The clouds in the "Ben Arthur," "Source of Arveron," and "Calais Pier," are among the best of Turner's storm studies; and of the upper clouds, the vignettes to Rogers's Poems furnish as many examples as you need.

And now, as our first lesson was taken from the sky, so, for the present, let our last be. I do not advise you to be in any haste to master the contents of my next letter. If you have any real talent for drawing, you will take delight in the discoveries of natural loveliness, which the studies I have already proposed will lead you into, among the fields and hills; and be assured that the more quietly and single-heartedly you take each step in the art, the quicker, on the whole, will your progress be. I would rather, indeed, have discussed the subjects of the following letter at greater length, and in a separate work addressed to more advanced students; but as there are one or two things to be said on composition which may set the young artist's mind somewhat more at rest, or furnish him with defence from the urgency of ill-advisers, I will glance over the main heads of the matter here; trusting that my doing so may not beguile you, my dear reader, from your serious work, or lead you to think me, in occupying part of this book with talk not altogether relevant to it, less entirely or

Faithfully yours,

J. RUSKIN.

LETTER III.

ON COLOUR AND COMPOSITION.

MY DEAR READER :—

If you have been obedient, and have hitherto done all that I have told you, I trust it has not been without much subdued remonstrance, and some serious vexation. For I should be sorry if, when you were led by the course of your study to observe closely such things as are beautiful in colour, you had not longed to paint them, and felt considerable difficulty in complying with your restriction to the use of black, or blue, or grey. You *ought* to love colour, and to think nothing quite beautiful or perfect without it ; and if you really do love it, for its own sake, and are not merely desirous to colour because you think painting a finer thing than drawing, there is some chance you may colour well. Nevertheless, you need not hope ever to produce anything more than pleasant helps to memory, or useful and suggestive sketches in colour, unless you mean to be wholly an artist. You may, in the time which other vocations leave at your disposal, produce finished, beautiful, and masterly drawings in light and shade. But to colour well, requires your life. It cannot be done cheaper. The difficulty of doing right is increased—not twofold nor threefold, but a thousandfold, and more—by the addition of colour to your work. For the chances are more than a thousand to one against your being right both in form and colour with a given touch : it is difficult enough to be right in form, if you attend to that only ; but when you have to attend, at the same moment, to a much more subtle thing than the form, the difficulty is strangely increased—and multiplied almost to infinity by this great fact, that, while form is absolute, so that you can say at the moment you draw any line that it is either right or wrong, colour is wholly *relative*. Every hue throughout your work is altered by every touch that you add in other places ; so that what was warm a minute ago, becomes cold

when you have put a hotter colour in another place, and what was in harmony when you left it, becomes discordant as you set other colours beside it ; so that every touch must be laid, not with a view to its effect at the time, but with a view to its effect in futurity, the result upon it of all that is afterwards to be done being previously considered. You may easily understand that, this being so, nothing but the devotion of life, and great genius besides, can make a colourist.

But though you cannot produce finished coloured drawings of any value, you may give yourself much pleasure, and be of great use to other people, by occasionally sketching with a view to colour only ; and preserving distinct statements of certain colour facts—as that the harvest-moon at rising was of such and such a red, and surrounded by clouds of such and such a rosy grey ; that the mountains at evening were in truth so deep in purple ; and the waves by the boat's side were indeed of that incredible green. This only, observe, if you have an eye for colour ; but you may presume that you have this, if you enjoy colour.

And, though of course you should always give as much form to your subject as your attention to its colour will admit of, remember that the whole value of what you are about depends, in a coloured sketch, on the colour *merely*. If the colour is wrong, everything is wrong : just as, if you are singing, and sing false notes, it does not matter how true the words are. If you sing at all, you must sing sweetly ; and if you colour at all, you must colour rightly. Give up *all* the form, rather than the slightest part of the colour : just as, if you felt yourself in danger of a false note, you would give up the word, and sing a meaningless sound, if you felt that so you could save the note. Never mind though your houses are all tumbling down—though your clouds are mere blots, and your trees mere knobs, and your sun and moon like crooked sixpences—so only that trees, clouds, houses, and sun or moon, are of the right colours. Of course, the discipline you have gone through will enable you to hint something of form, even in the fastest sweep of the brush ; but do not let the thought of form hamper you in the least, when you begin to make coloured

memoranda. If you want the form of the subject, draw it in black and white. If you want its colour, take its colour, and be sure you *have* it, and not a spurious, treacherous, half-measured piece of mutual concession, with the colours all wrong, and the forms still anything but right. It is best to get into the habit of considering the coloured work merely as supplementary to your other studies; making your careful drawings of the subject first, and then a coloured memorandum separately, as shapeless as you like, but faithful in hue, and entirely minding its own business. This principle, however, bears chiefly on large and distant subjects; in foregrounds and near studies, the colour cannot be had without a good deal of definition of form. For if you do not map the mosses on the stones accurately, you will not have the right quantity of colour in each bit of moss pattern, and then none of the colours will look right; but it always simplifies the work much if you are clear as to your point of aim, and satisfied, when necessary, to fail of all but that.

Now, of course, if I were to enter into detail respecting colouring, which is the beginning and end of a painter's craft, I should need to make this a work in three volumes instead of three letters, and to illustrate it in the costliest way. I only hope at present to set you pleasantly and profitably to work, leaving you, within the tethering of certain leading-strings, to gather what advantages you can from the works of art of which every year brings a greater number within your reach;—and from the instruction which, every year, our rising artists will be more ready to give kindly, and better able to give wisely.

And, first, of materials. Use hard cake colours, not moist colours: grind a sufficient quantity of each on your palette every morning, keeping a separate plate, large and deep, for colours to be used in broad washes, and wash both plate and palette every evening, so as to be able always to get good and pure colour when you need it; and force yourself into cleanly and orderly habits about your colours. The two best colourists of modern times, Turner and Rossetti,* afford us, I

* I give Rossetti this preëminence, because, though the leading Pre-Raphaelites have all about equal power over colour in the abstract,

am sorry to say, no confirmation of this precept by their practice. Turner was, and Rossetti is, as slovenly in all their procedures as men can well be ; but the result of this was, with Turner, that the colours have altered in all his pictures, and in many of his drawings ; and the result of it with Rossetti is, that, though his colours are safe, he has sometimes to throw aside work that was half done, and begin over again. William Hunt, of the Old Water-colour, is very neat in his practice ; so, I believe, is Mulready ; so is John Lewis ; and so are the leading Pre-Raphaelites, Rossetti only excepted. And there can be no doubt about the goodness of the advice, if it were only for this reason, that the more particular you are about your colours the more you will get into a deliberate and methodical habit in using them, and all true *speed* in colouring comes of this deliberation.

Use Chinese white, well ground, to mix with your colours in order to pale them, instead of a quantity of water. You will thus be able to shape your masses more quietly, and play the colours about with more ease ; they will not damp your paper so much, and you will be able to go on continually, and lay forms of passing cloud and other fugitive or delicately shaped lights, otherwise unattainable except by time.

This mixing of white with the pigments, so as to render them opaque, constitutes *body-colour* drawing as opposed to *transparent-colour* drawing and you will, perhaps, have it often said to you that this body-colour is "illegitimate." It is just as legitimate as oil-painting, being, so far as handling is concerned, the same process, only without its uncleanness, its unwholesomeness, or its inconvenience ; for oil will not dry quickly, nor carry safely, nor give the same effects of atmosphere without tenfold labour. And if you hear it said that the body-colour looks chalky or opaque, and, as is very likely, think so yourself, be yet assured of this, that though certain

Rossetti and Holman Hunt are distinguished above the rest for rendering colour under effects of light ; and of these two, Rossetti composes with richer fancy, and with a deeper sense of beauty, Hunt's stern realism leading him continually into harshness. Rossetti's carelessness, to do him justice, is only in water-colour, never in oil.

effects of glow and transparencies of gloom are not to be reached without transparent colour, those glows and glooms are *not* the noblest aim of art. After many years' study of the various results of fresco and oil painting in Italy, and of body-colour and transparent colour in England, I am now entirely convinced that the greatest things that are to be done in art must be done in dead colour. The habit of depending on varnish or on lucid tints transparency, makes the painter comparatively lose sight of the nobler translucence which is obtained by breaking various colours amidst each other : and even when, as by Correggio, exquisite play of hue is joined with exquisite transparency, the delight in the depth almost always leads the painter into mean and false chiaroscuro ; it leads him to like dark backgrounds instead of luminous ones,* and to enjoy, in general, quality of colour more than grandeur of composition, and confined light rather than open sunshine : so that the really greatest thoughts of the greatest men have always, so far as I remember, been reached in dead colour,

* All the degradation of art which was brought about, after the rise of the Dutch school, by asphaltum, yellow varnish, and brown trees, would have been prevented, if only painters had been forced to work in dead colour. Any colour will do for some people, if it is browned and shining ; but fallacy in dead colour is detected on the instant. I even believe that whenever a painter begins to *wish* that he could touch any portion of his work with gum, he is going wrong.

It is necessary, however, in this matter, carefully to distinguish between translucency and lustre. Translucency, though, as I have said above, a dangerous temptation, is, in its place, beautiful ; but lustre, or *shininess*, is always, in painting, a defect. Nay, one of my best painter-friends (the "best" being understood to attach to both divisions of that awkward compound word), tried the other day to persuade me that lustre was an ignobleness in *anything* ; and it was only the fear of treason to ladies' eyes, and to mountain streams, and to morning dew, which kept me from yielding the point to him. One is apt always to generalise too quickly in such matters ; but there can be no question that lustre is destructive of loveliness in colour, as it is of intelligibility in form. Whatever may be the pride of a young beauty in the knowledge that her eyes shine (though perhaps even eyes are most beautiful in dimness), she would be sorry if her cheeks did ; and which of us would wish to polish a rose ?

and the noblest oil pictures of Tintoret and Veronese are those which are likest frescos.

Besides all this, the fact is, that though sometimes a little chalky and coarse-looking, body-colour is, in a sketch, infinitely liker nature than transparent colour: the bloom and mist of distance are accurately and instantly represented by the film of opaque blue (*quite* accurately, I think, by *nothing* else); and for ground, rocks, and buildings, the earthy and solid surface is, of course, always truer than the most finished and carefully wrought work in transparent tints can ever be.

Against one thing, however, I must steadily caution you. All kinds of colour are equally illegitimate, if you think they will allow you to alter at your pleasure, or blunder at your ease. There is *no* vehicle or method of colour which admits of alteration or repentance; you must be right at once, or never; and you might as well hope to catch a rifle bullet in your hand, and put it straight, when it was going wrong, as to recover a tint once spoiled. The secret of all good colour in oil, water, or anything else, lies primarily in that sentence spoken to me by Mulready: "Know what you have to do." The process may be a long one, perhaps: you may have to ground with one colour; to touch it with fragments of a second; to crumble a third into the interstices; a fourth into the interstices of the third; to glaze the whole with a fifth; and to reinforce in points with a sixth: but whether you have one, or ten, or twenty processes to go through, you must go *straight* through them, knowingly and foreseeingly all the way; and if you get the thing once wrong, there is no hope for you but in washing or scraping boldly down to the white ground, and beginning again.

The drawing in body-colour will tend to teach you all this, more than any other method, and above all it will prevent you from falling into the pestilent habit of sponging to get texture; a trick which has nearly ruined our modern water-colour school of art. There are sometimes places in which a skilful artist will roughen his paper a little to get certain conditions of dusty colour with more ease than he could otherwise; and sometimes a skilfully rased piece of paper will, in the midst

of transparent tints, answer nearly the purpose of chalky body-colour in representing the surfaces of rocks or buildings. But artifices of this kind are always treacherous in a tyro's hands, tempting him to trust in them; and you had better always work on white or grey paper as smooth as silk; * and never disturb the surface of your colour or paper, except finally to scratch out the very highest lights if you are using transparent colours.

I have said above that body-colour drawing will teach you the use of colour better than working with merely transparent tints; but this is not because the process is an easier one, but because it is a more *complete* one, and also because it involves *some* working with transparent tints in the best way. You are not to think that because you use body-colour you may make any kind of mess that you like, and yet get out of it. But you are to avail yourself of the characters of your material, which enable you most nearly to imitate the processes of Nature. Thus, suppose you have a red rocky cliff to sketch, with blue clouds floating over it. You paint your cliff first firmly, then take your blue, mixing it to such a tint (and here is a great part of the skill needed), that when it is laid over the red, in the thickness required for the effect of the mist, the warm rock-colour showing through the blue cloud-colour, may bring it to exactly the hue you want; (your upper tint, therefore, must be mixed colder than you want it;) then you lay it on, varying it as you strike it, getting the forms of the mist at once, and, if it be rightly done, with exquisite quality of colour, from the warm tint's showing through and between the particles of the other. When it is dry, you may add a little colour to retouch the edges where they want shape, or heighten the lights where they want roundness, or put another tone over the whole; but you can

* But not shiny or greasy. Bristol board, or hot-pressed imperial, or grey paper that feels slightly adhesive to the hand, is best. Coarse, gritty, and sandy papers are fit only for blotters and blunderers; no good draughtsman would lay a line on them. Turner worked much on a thin tough paper, dead in surface; rolling up his sketches in tight bundles that would go deep into his pockets.

take none away. If you touch or disturb the surface, or by any untoward accident mix the under and upper colours together, all is lost irrecoverably. Begin your drawing from the ground again if you like, or throw it into the fire if you like. But do not waste time in trying to mend it.*

This discussion of the relative merits of transparent and opaque colour has, however, led us a little beyond the point where we should have begun; we must go back to our palette, if you please. Get a cake of each of the hard colours named in the note below † and try experiments on their simple combinations, by mixing each colour with every other. If you like to do it in an orderly way, you may prepare a squared piece of pasteboard, and put the pure colours in columns at

* I insist upon this unalterability of colour the more because I address you as a beginner, or an amateur; a great artist can sometimes get out of a difficulty with credit, or repent without confession. Yet even Titian's alterations usually show as stains on his work.

† It is, I think, a piece of affectation to try to work with few colours; it saves time to have enough tints prepared without mixing, and you may at once allow yourself these twenty-four. If you arrange them in your colour-box in the order I have set them down, you will always easily put your finger on the one you want.

Cobalt.	Smalt.	Antwerp blue.	Prussian blue.
Black.	Gamboge.	Emerald green.	Hooker's green.
Lemon yellow.	Cadmium yellow.	Yellow ochre.	Roman ochre.
Raw sienna.	Burnt sienna.	Light red.	Indian red.
Mars orange.	Ext'd of vermilion.	Carmine.	Violet carmine.
Brown madder.	Burnt umber.	Vandyke brown.	Sepia.

Antwerp blue and Prussian blue are not very permanent colours, but you need not care much about permanence in your own work as yet, and they are both beautiful; while Indigo is marked by Field as more fugitive still, and is very ugly. Hooker's green is a mixed colour, put in the box merely to save you loss of time in mixing gamboge and Prussian blue. No. 1. is the best tint of it. Violet carmine is a noble colour for laying broken shadows with, to be worked into afterwards with other colours.

If you wish to take up colouring seriously, you had better get Field's "Chromatography" at once; only do not attend to anything it says about principles or harmonies of colour; but only to its statements of practical serviceableness in pigments, and of their operations on each other when mixed, &c.

the top and side ; the mixed tints being given at the intersections, thus (the letters standing for colours) :

	b	c	d	e	f	&c
a	ab	ac	ad	ae	af	
b	—	bc	bd	be	bf	
c	—	—	cd	ce	cf	
d	—	—	—	de	df	
e	—	—	—	—	ef	
&c.						

This will give you some general notion of the characters of mixed tints of two colours only, and it is better in practice to confine yourself as much as possible to these, and to get more complicated colours, either by putting a third over the first blended tint, or by putting the third into its interstices. Nothing but watchful practice will teach you the effects that colours have on each other when thus put over, or beside, each other.

When you have got a little used to the principal combinations, place yourself at a window which the sun does not shine in at, commanding some simple piece of landscape ; outline this landscape roughly ; then take a piece of white cardboard, cut out a hole in it about the size of a large pea ; and supposing *R* is the room, *a d* the window, and you are sitting at *a*, Fig. 29., hold this cardboard a little outside of the window, upright, and in the direction *b d*, parallel a little turned to the side of the window, or so as to catch more light, as at *a d*, never turned as at *c d*, or the paper will be dark. Then you will see the landscape, bit by bit, through the circular hole. Match the colours of each important bit as nearly as you can, mixing your tints with white, beside the aperture. When matched, put a touch of the same tint at the top of your paper, writing under it: “dark tree colour,” “hill colour,” “field colour,” as the case may by. Then wash the tint

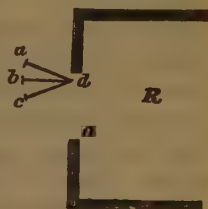


FIG. 29.

away from beside the opening, and the cardboard will be ready to match another piece of the landscape.* When you have got the colours of the principal masses thus indicated, lay on a piece of each in your sketch in its right place, and then proceed to complete the sketch in harmony with them, by your eye.

In the course of your early experiments, you will be much struck by two things: the first, the inimitable brilliancy of light in sky and in sun-lighted things: and the second, that among the tints which you can imitate, those which you thought the darkest will continually turn out to be in reality the lightest. Darkness of objects is estimated by us, under ordinary circumstances, much more by *knowledge* than by sight; thus, a cedar or Scotch fir, at 200 yards off, will be thought of darker green than an elm or oak near us; because we know by experience that the peculiar colour they exhibit, at that distance, is the *sign* of darkness of foliage. But when we try them through the cardboard, the near oak will be found, indeed, rather dark green, and the distant cedar, perhaps, pale gray-purple. The quantity of purple and grey in Nature is, by the way, another somewhat surprising subject of discovery.

Well, having ascertained thus your principal tints, you may proceed to fill up your sketch; in doing which observe these following particulars:

1. Many portions of your subject appeared through the aperture in the paper brighter than the paper, as sky, sun-lighted grass, &c. Leave these portions, for the present, white; and proceed with the parts of which you can match the tints.

* A more methodical, though, under general circumstances, uselessly prolix way, is to cut a square hole, some half an inch wide, in the sheet of cardboard, and a series of small circular holes in a slip of cardboard an inch wide. Pass the slip over the square opening, and match each colour beside one of the circular openings. You will thus have no occasion to wash any of the colours away. But the first rough method is generally all you want, as after a little practice, you only need to *look* at the hue through the opening in order to be able to transfer it to your drawing at once.

2. As you tried your subject with the cardboard, you must have observed how many changes of hue took place over small spaces. In filling up your work, try to educate your eye to perceive these differences of hue without the help of the cardboard, and lay them deliberately, like a mosaic-worker, as separate colours, preparing each carefully on your palette, and laying it as if it were a patch of coloured cloth, cut out, to be fitted neatly by its edge to the next patch ; so that the *fault* of your work may be, not a slurred or misty look, but a patched bed-cover look, as if it had all been cut out with scissors. For instance, in drawing the trunk of a birch tree, there will be probably white high lights, then a pale rosy grey round them on the light side, then a (probably greenish) deeper grey on the dark side, varied by reflected colours, and over all, rich black strips of bark and brown spots of moss. Lay first the rosy grey, leaving white for the high lights *and for the spots of moss*, and not touching the dark side. Then lay the grey for the dark side, fitting it well up to the rosy grey of the light, leaving also in this darker grey the white paper in the places for the black and brown moss ; then prepare the moss colours separately for each spot, and lay each in the white place left for it. Not one grain of white, except that purposely left for the high lights, must be visible when the work is done, even through a magnifying-glass, so cunningly must you fit the edges to each other. Finally, take your background colours, and put them on each side of the tree-trunk, fitting them carefully to its edge.

Fine work you would make of this, wouldn't you, if you had not learned to draw first, and could not now draw a good outline for the stem, much less terminate a colour mass in the outline you wanted ?

Your work will look very odd for some time, when you first begin to paint in this way, and before you can modify it, as I shall tell you presently how ; but never mind ; it is of the greatest possible importance that you should practice this separate laying on of the hues, for all good colouring finally depends on it. It is, indeed, often necessary, and sometimes desirable, to lay one colour and form boldly over another : thus,

in laying leaves on blue sky, it is impossible always in large pictures, or when pressed for time, to fill in the blue through the interstices of the leaves; and the great Venetians constantly lay their blue ground first, and then, having let it dry, strike the golden brown over it in the form of the leaf, leaving the under blue to shine through the gold, and subdue it to the olive green they want. But in the most precious and perfect work each leaf is inlaid, and the blue worked round it: and, whether you use one or other mode of getting your result, it is equally necessary to be absolute and decisive in your laying the colour. Either your ground must be laid firmly first, and then your upper colour struck upon it in perfect form, for ever, thenceforward, unalterable; or else the two colours must be individually put in their places, and led up to each other till they meet at their appointed border, equally, thenceforward, unchangeable. Either process, you see, involves *absolute* decision. If you once begin to slur, or change, or sketch, or try this way and that with your colour, it is all over with it and with you. You will continually see bad copyists trying to imitate the Venetians, by daubing their colours about, and retouching, and finishing, and softening: when every touch and every added hue only lead them farther into chaos. There is a dog between two children in a Veronese in the Louvre, which gives the copyist much employment. He has a dark ground behind him, which Veronese has painted first, and then when it was dry, or nearly so, struck the locks of the dog's white hair over it with some half-dozen curling sweeps of his brush, right at once, and forever. Had one line or hair of them gone wrong, it would have been wrong forever; no retouching could have mended it. The poor copyists daub in first some background, and then some dog's hair; then retouch the background, then the hair, work for hours at it, expecting it always to come right to-morrow—"when it is finished." They *may* work for centuries at it, and they will never do it. If they can do it with Veronese's allowance of work, half a dozen sweeps of the hand over the dark background, well; if not, they may ask the dog himself whether it will ever come right, and get true answer from him—on Launce's conditions: "If he say

‘ay,’ it will ; if he say ‘no,’ it will ; if he shake his tail and say nothing, it will.”

Whenever you lay on a mass of colour, be sure that however large it may be, or however small, it shall be gradated. No colour exists in Nature under ordinary circumstances without gradation. If you do not see this, it is the fault of your inexperience ; you *will* see it in due time, if you practise enough. But in general you may see it at once. In the birch trunk, for instance, the rosy grey *must* be gradated by the roundness of the stem till it meets the shaded side ; similarly the shaded side is gradated by reflected light. Accordingly, whether by adding water, or white paint, or by unequal force of touch (this you will do at pleasure, according to the texture you wish to produce), you must, in every tint you lay on, make it a little paler at one part than another, and get an even gradation between the two depths. This is very like laying down a formal law or recipe for you ; but you will find it is merely the assertion of a natural fact. It is not indeed physically impossible to meet with an ungradated piece of colour, but it is so supremely improbable, that you had better get into the habit of asking yourself invariably, when you are going to copy a tint,—not “*Is that gradated?*” but “*Which way is it gradated?*” and at least in ninety-nine out of a hundred instances, you will be able to answer decisively after a careful glance, though the gradation may have been so subtle that you did not see it at first. And it does not matter how small the touch of colour may be, though not larger than the smallest pin’s head, if one part of it is not darker than the rest, it is a bad touch ; for it is not merely because the natural fact is so, that your colour should be gradated ; the preciousness and pleasantness of the colour itself depends more on this than on any other of its qualities, for gradation is to colours just what curvature is to lines, both being felt to be beautiful by the pure instinct of every human mind, and both, considered as types, expressing the law of gradual change and progress in the human soul itself. What the difference is in mere beauty between a gradated and ungradated colour, may be seen easily by laying an even tint of rose-colour on paper, and putting a

rose leaf beside it. The victorious beauty of the rose as compared with other flowers, depends wholly on the delicacy and buantity of its colour gradations, all other flowers being either less rich in gradation, not having so many folds of leaf ; or less tender, being patched and veined instead of flushed.

4. But observe, it is not enough in general that colour should be gradated by being made merely paler or darker at one place than another. Generally colour *changes* as it *diminishes*, and is not merely *darker* at one spot, but also *purer* at one spot than anywhere else. It does not in the least follow that the darkest spot should be the purest ; still less so that the lightest should be the purest. Very often the two gradations more or less cross each other, one passing in one direction from paleness to darkness, another in another direction from purity to dullness, but there will almost always be both of them, however reconciled ; and you must never be satisfied with a piece of colour until you have got both : that is to say, every piece of blue that you lay on must be *quite* blue only at some given spot, nor that a large spot ; and must be gradated from that into less pure blue—greyish blue, or greenish blue, or purplish blue, over all the rest of the space it occupies. And this you must do in one of three ways : either, while the colour is wet, mix it with the colour which is to subdue it, adding gradually a little more and a little more ; or else, when the colour is quite dry, strike a gradated touch of another colour over it, leaving only a point of the first tint visible : or else, lay the subduing tints on in small touches, as in the exercise of tinting the chess-board. Of each of these methods I have something to tell you separately : but that is distinct from the subject of gradation, which I must not quit without once more pressing upon you the preëminent necessity of introducing it everywhere. I have profound dislike of anything like *habit* of hand, and yet, in this one instance, I feel almost tempted to encourage you to get into a habit of never touching paper with colour, without securing a gradation. You will not in Turner's largest oil pictures, perhaps six or seven feet long by four or five high, find one spot of colour as large

as a grain of wheat ungradated : and you will find in practice, that brilliancy of hue, and vigour of light, and even the aspect of transparency in shade, are essentially dependent on this character alone ; hardness, coldness, and opacity resulting far more from *equality* of colour than from nature of colour. Give me some mud off a city crossing, some ochre out of a gravel pit, a little whitening, and some coal-dust, and I will paint you a luminous picture, if you give me time to gradate my mud, and subdue my dust : but though you had the red of the ruby, the blue of the gentian, snow for the light, and amber for the gold, you cannot paint a luminous picture, if you keep the masses of those colours unbroken in purity, and unvarying in depth.

5. Next note the three processes by which gradation and other characters are to be obtained :

A. Mixing while the colour is wet.

You may be confused by my first telling you to lay on the hues in separate patches, and then telling you to mix hues together as you lay them on : but the separate masses are to be laid, when colours distinctly oppose each other at a given limit ; the hues to be mixed, when they palpitate one through the other, or fade one into the other. It is better to err a little on the distinct side. Thus I told you to paint the dark and light sides of the birch trunk separately, though in reality, the two tints change, as the trunk turns away from the light, gradually one into the other : and, after being laid separately on, will need some farther touching to harmonize them : but they do so in a very narrow space, marked distinctly all the way up the trunk ; and it is easier and safer, therefore, to keep them separate at first. Whereas it often happens that the whole beauty of two colours will depend on the one being continued well through the other, and playing in the midst of it : blue and green often do so in water : blue and grey, or purple and scarlet, in sky ; in hundreds of such instances the most beautiful and truthful results may be obtained by laying one colour into the other while wet ; judging wisely how far it will spread, or blending it with the brush in somewhat thicker consistence of wet body-colour ; only observe, never

mix in this way two *mixtures* ; let the colour you lay into the other be always a simple, not a compound tint.

B. Laying one colour over another.

If you lay on a solid touch of vermilion, and, after it is quite dry, strike a little very wet carmine quickly over it, you will obtain a much more brilliant red than by mixing the carmine and vermilion. Similarly, if you lay a dark colour first, and strike a little blue or white body-colour lightly over it, you will get a more beautiful grey than by mixing the colour and the blue or white. In very perfect painting, artifices of this kind are continually used ; but I would not have you trust much to them ; they are apt to make you think too much of quality of colour. I should like you to depend on little more than the dead colours, simply laid on, only observe always this, that the *less* colour you do the work with, the better it will always be : * so that if you have laid a red colour, and you want a purple one above, do not mix the purple on your palette and lay it on so thick as to overpower the red, but take a little thin blue from your palette, and lay it lightly over the red, so as to let the red be seen through, and thus produce the required purple ; and if you want a green hue over a blue one, do not lay a quantity of green on the blue, but a *little* yellow, and so on, always bringing the under colour into service as far as you possibly can. If, however, the colour beneath is wholly opposed to the one you have to lay on, as, suppose, if green is to be laid over scarlet, you must either remove the required parts of the under colour daintily first with your knife, or with water ; or else, lay solid white over it massively, and leave that to dry, and then glaze the white with the upper colour. This is better, in general, than laying the upper colour itself so thick as to conquer the ground, which, in fact, if it be a transparent colour, you cannot do.

* If colours were twenty times as costly as they are, we should have many more good painters. If I were Chancellor of the Exchequer I would lay a tax of twenty shillings a cake on all colours except black, Prussian blue, Vandyke brown, and Chinese white, which I would leave for students. I don't say this jestingly ; I believe such a tax would do more to advance real art than a great many schools of design.

Thus, if you have to strike warm boughs and leaves of trees over blue sky, and they are too intricate to have their places left for them in laying the blue, it is better to lay them first in solid white, and then glaze with sienna and ochre, than to mix the sienna and white; though, of course, the process is longer and more troublesome. Nevertheless, if the forms of touches required are very delicate, the after glazing is impossible. You must then mix the warm colour thick at once, and so use it: and this is often necessary for delicate grasses, and such other fine threads of light in foreground work.

C. Breaking one colour in small points through or over another.

This is the most important of all processes in good modern* oil and water-colour painting, but you need not hope to attain very great skill in it. To do it well is very laborious, and requires such skill and delicacy of hand as can only be acquired by unceasing practice. But you will find advantage in noting the following points:

(a.) In distant effects of rich subjects, wood, or rippled water, or broken clouds, much may be done by touches or crumbling dashes of rather dry colour, with other colours afterwards put cunningly into the interstices. The more you practise this, when the subject evidently calls for it, the more your eye will enjoy the higher qualities of colour. The process is, in fact, the carrying out of the principle of separate colours to the utmost possible refinement; using atoms of colour in juxtaposition, instead of large spaces. And note, in filling up minute interstices of this kind, that if you want the colour you fill them with to show brightly, it is better to put a rather positive point of it, with a little white left beside or round it in the interstice, than to put a pale tint of the colour over the whole interstice. Yellow or orange will hardly show, if pale, in small spaces; but they show brightly in firm touches, however small, with white beside them.

(b.) If a colour is to be darkened by superimposed portions

* I say *modern*, because Titian's quiet way of blending colours, which is the perfectly right one, is not understood now by any artist. The best colour we reach is got by stippling; but this not quite right.

of another, it is, in many cases, better to lay the uppermost colour in rather vigorous small touches, like finely chopped straw, over the under one, than to lay it on as a tint, for two reasons: the first, that the play of the two colours together is pleasant to the eye; the second, that much expression of form may be got by wise administration of the upper dark touches. In distant mountains they may be made pines of, or broken crags, or villages, or stones, or whatever you choose; in clouds they may indicate the direction of the rain, the roll and outline of the cloud masses; and in water, the minor waves. All noble effects of dark atmosphere are got in good water-colour drawing by these two expedients, interlacing the colours, or retouching the lower one with fine darker drawing in an upper. Sponging and washing for dark atmospheric effect is barbarous, and mere tyro's work, though it is often useful for passages of delicate atmospheric light.

(c.) When you have time, practice the production of mixed tints by interlaced touches of the pure colours out of which they are formed, and use the process at the parts of your sketches where you wish to get rich and luscious effects. Study the works of William Hunt, of the Old Water-colour Society, in this respect, continually, and make frequent memoranda of the variegations in flowers; not painting the flower completely, but laying the ground colour of one petal, and painting the spots on it with studious precision: a series of single petals of lilies, geraniums, tulips, &c., numbered with proper reference to their position in the flower, will be interesting to you on many grounds besides those of art. Be careful to get the *gradated* distribution of the spots well followed in the calceolarias, foxgloves, and the like; and work out the odd, indefinite hues of the spots themselves with minute grains of pure interlaced colour, otherwise you will never get their richness or bloom. You will be surprised to find, as you do this, first the universality of the law of gradation we have so much insisted upon; secondly, that Nature is just as economical of *her* fine colours as I have told you to be of yours. You would think, by the way she paints, that her colours cost her something enormous: she will only give you a single pure touch.

just where the petal turns into light ; but down in the bell all is subdued, and under the petal all is subdued, even in the showiest flower. What you thought was bright blue is, when you look close, only dusty grey, or green, or purple, or every colour in the world at once, only a single gleam or streak of pure blue in the centre of it. And so with all her colours. Sometimes I have really thought her miserliness intolerable : in a gentian, for instance, the way she economises her ultramarine down in the bell is a little too bad.

Next, respecting general tone. I said, just now, that, for the sake of students, my tax should not be laid on black or on white pigments ; but if you mean to be a colourist, you must lay a tax on them yourselves when you begin to use true colour ; that is to say, you must use them little and make of them much. There is no better test of your colour tones being good, than your having made the white in your picture precious, and the black conspicuous.

I say, first, the white precious. I do not mean merely glittering or brilliant ; it is easy to scratch white seagulls out of black clouds and dot clumsy foliage with chalky dew ; but, when white is well managed, it ought to be strangely delicious—tender as well as bright—like inlaid mother of pearl, or white roses washed in milk. The eye ought to seek it for rest, brilliant though it may be ; and to feel it as a space of strange, heavenly paleness in the midst of the flushing of the colours. This effect you can only reach by general depth of middle tint, by absolutely refusing to allow any white to exist except where you need it, and by keeping the white itself subdued by grey, except at a few points of chief lustre.

Secondly, you must make the black conspicuous. However small a point of black may be, it ought to catch the eye, otherwise your work is too heavy in the shadow. All the ordinary shadows should be of some *colour*—never black, nor approaching black, they should be evidently and always of a luminous nature, and the black should look strange among them ; never occurring except in a black object, or in small points indicative of intense shade in the very centre of masses of shadow. Shadows of absolutely negative grey, however,

may be beautifully used with white, or with gold ; but still though the black thus, in subdued strength, becomes *spacious*, it should always be *conspicuous* ; the spectator should notice this grey neutrality with some wonder, and enjoy, all the more intensely on account of it, the gold colour and the white which it relieves. Of all the great colourists Velasquez is the greatest master of the black chords. His black is more precious than most other people's crimson.

It is not, however, only white and black which you must make valuable ; you must give rare worth to every colour you use ; but the white and black ought to separate themselves quaintly from the rest, while the other colours should be continually passing one into the other, being all evidently companions in the same gay world ; while the white, black, and neutral grey should stand monkishly aloof in the midst of them. You may melt your crimson into purple, your purple into blue and your blue into green, but you must not melt any of them into black. You should, however, try, as I said, to give *preciousness* to all your colours ; and this especially by never using a grain more than will just do the work, and giving each hue the highest value by opposition. All fine colouring, like fine drawing, is *delicate* ; and so delicate that if, at last, you *see* the colour you are putting on, you are putting on too much. You ought to feel a change wrought in the general tone, by touches of colour which individually are too pale to be seen ; and if there is one atom of any colour in the whole picture which is unnecessary to it, that atom hurts it.

Notice also, that nearly all good compound colours are *odd* colours. You shall look at a hue in a good painter's work ten minutes before you know what to call it. You thought it was brown, presently, you feel that it is red ; next that there is, somehow, yellow in it ; presently afterwards that there is blue in it. If you try to copy it you will always find your colour too warm or too cold—no colour in the box will seem to have any affinity with it ; and yet it will be as pure as if it were laid at a single touch with a single colour.

As to the choice and harmony of colours in general, if you

cannot choose and harmonize them by instinct, you will never do it at all. If you need examples of utterly harsh and horrible colour, you may find plenty given in treatises upon colouring, to illustrate the laws of harmony ; and if you want to colour beautifully, colour as best pleases yourself at *quiet times*, not so as to catch the eye, nor to look as if it were clever or difficult to colour in that way, but so that the colour may be pleasant to you when you are happy, or thoughtful. Look much at the morning and evening sky, and much at simple flowers—dog-roses, wood hyacinths, violets, poppies, thistles, heather, and such like—as Nature arranges them in the woods and fields. If ever any scientific person tells you that two colours are “discordant,” make a note of the two colours, and put them together whenever you can. I have actually heard people say that blue and green were discordant ; the two colours which Nature seems to intend never to be separated and never to be felt, either of them, in its full beauty without the other !—a peacock’s neck, or a blue sky through green leaves, or a blue wave with green lights though it, being precisely the loveliest things, next to clouds at sunrise, in this coloured world of ours. If you have a good eye for colours, you will soon find out how constantly Nature puts purple and green together, purple and scarlet, green and blue, yellow and neutral grey, and the like ; and how she strikes these colour-concords for general tones, and then works into them with innumerable subordinate ones ; and you will gradually come to like what she does, and find out new and beautiful chords of colour in her work every day. If you *enjoy* them, depend upon it you will paint them to a certain point right : or, at least, if you do not enjoy them, you are certain to paint them wrong. If colour does not give you *intense* pleasure, let it alone ; depend upon it, you are only tormenting the eyes and senses of people who feel colour, whenever you touch it ; and that is unkind and improper. You will find, also, your power of colouring depend much on your state of health and right balance of mind ; when you are fatigued or ill you will not see colours well, and when you are ill-tempered you will not choose them well : thus, though not infallibly a test of char-

acter in individuals, colour power is a great sign of mental health in nations ; when they are in a state of intellectual decline, their colouring always gets dull.* You must also take great care not to be misled by affected talk about colour from people who have not the gift of it : numbers are eager and voluble about it who probably never in all their lives received one genuine colour-sensation. The modern religionists of the school of Overbeck are just like people who eat slate-pencil and chalk, and assure everybody that they are nicer and purer than strawberries and plums.

Take care also never to be misled into any idea that colour can help or display *form* ; colour † always disguises form, and is meant to do so.

It is a favourite dogma among modern writers on colour that “ warm colours ” (reds and yellows) “ approach ” or express nearness, and “ cold colours ” (blue and grey) “ retire ” or express distance. So far is this from being the case, that no expression of distance in the world is so great as that of the gold and orange in twilight sky. Colours, as such, are ABSOLUTELY inexpressive respecting distance. It is their *quality* (as depth, delicacy, &c.) which expresses distance, not their

* The worst general character that colour can possibly have is a prevalent tendency to a dirty yellowish green, like that of a decaying heap of vegetables ; this colour is *accurately* indicative of decline or paralysis in missal-painting.

† That is to say, local colour inherent in the object. The gradations of colour in the various shadows belonging to various lights exhibit form, and therefore no one but a colourist can ever draw *forms* perfectly (see “ Modern Painters,” vol. iv. chap. iii. at the end) ; but all notions of explaining form by superimposed colour, as in architectural mouldings, are absurd. Colour adorns form, but does not interpret it. An apple is prettier, because it is striped, but it does not look a bit rounder ; and a cheek is prettier because it is flushed, but you would see the form of the cheek bone better if it were not. Colour may, indeed, detach one shape from another, as in grounding a bas-relief, but it always diminishes the appearance of projection, and whether you put blue, purple, red, yellow, or green, for your ground, the bas-relief will be just as clearly or just as imperfectly relieved, as long as the colours are of equal depth. The blue ground will not retire the hundredth part of an inch more than the red one.

tint. A blue bandbox set on the same shelf with a yellow one will not look an inch farther off, but a red or orange cloud, in the upper sky, will always appear to be beyond a blue cloud close to us, as it is in reality. It is quite true that in certain objects, blue is a *sign* of distance ; but that is not because blue is a retiring colour, but because the mist in the air is blue, and therefore any warm colour which has not strength of light enough to pierce the mist is lost or subdued in its blue : but blue is no more, on this account, a “retiring colour,” than brown is a retiring colour, because, when stones are seen through brown water, the deeper they lie the browner they look ; or than yellow is a retiring colour, because when objects are seen through a London fog, the farther off they are the yellower they look. Neither blue, nor yellow, nor red, can have, as such, the *smallest* power of expressing either nearness or distance : they express them only under the peculiar circumstances which render them at the moment, or in that place, *signs* of nearness or distance. Thus, vivid orange in an orange is a sign of nearness, for if you put the orange a great way off, its colour will not look so bright ; but vivid orange in sky is a sign of distance, because you cannot get the colour of orange in a cloud near you. So purple in a violet or a hyacinth is a sign of nearness, because the closer you look at them the more purple you see. But purple in a mountain is a sign of distance, because a mountain close to you is not purple, but green or grey. It may, indeed, be generally assumed that a tender or pale colour will more or less express distance, and a powerful or dark colour nearness ; but even this is not always so. Heathery hills will usually give a pale and tender purple near, and an intense and dark purple far away ; the rose colour of sunset on snow is pale on the snow at your feet, deep and full on the snow in the distance ; and the green of a Swiss lake is pale in the clear waves on the beach, but intense as an emerald in the sunstreak, six miles from shore. And in any case, when the foreground is in strong light, with much water about it, or white surface, casting intense reflections, all its colours may be perfectly delicate, pale, and faint ; while the distance, when it is in shadow, may re-

lieve the whole foreground with intense darks of purple, blue green, or ultramarine blue. So that, on the whole, it is quite hopeless and absurd to expect any help from laws of "aërial perspective." Look for the natural effects, and set them down as fully as you can, and as faithfully, and *never* alter a colour because it won't look in its right place. Put the colour strong, if it be strong, though far off; faint, if it be faint, though close to you. Why should you suppose that Nature always means you to know exactly how far one thing is from another? She certainly intends you always to enjoy her colouring, but she does not wish you always to measure her space. You would be hard put to it, every time you painted the sun setting, if you had to express his 95,000,000 miles of distance in "aërial perspective."

There is, however, I think, one law about distance, which has some claims to be considered a constant one: namely, that dullness and heaviness of colour are more or less indicative of nearness. All distant colour is *pure* colour: it may not be bright, but it is clear and lovely, not opaque nor soiled; for the air and light coming between us and any earthy or imperfect colour, purify or harmonise it; hence a bad colourist is peculiarly incapable of expressing distance. I do not of course mean that you are to use bad colours in your foreground by way of making it come forward; but only that a failure in colour, there, will not put it out of its place; while a failure in colour in the distance will at once do away with its remoteness: your dull-coloured foreground will still be a foreground, though ill-painted; but your ill-painted distance will not be merely a dull distance,—it will be no distance at all.

I have only one thing more to advise you, namely, never to colour petulantly or hurriedly. You will not, indeed, be able, if you attend properly to your colouring, to get anything like the quantity of form you could in a chiaroscuro sketch; nevertheless, if you do not dash or rush at your work, nor do it lazily, you may always get enough form to be satisfactory. An extra quarter of an hour, distributed in quietness over the course of the whole study, may just make the difference

between a quite intelligible drawing, and a slovenly and obscure one. If you determine well beforehand what outline each piece of colour is to have ; and, when it is on the paper, guide it without nervousness, as far as you can, into the form required ; and then, after it is dry, consider thoroughly what touches are needed to complete it, before laying one of them on ; you will be surprised to find how masterly the work will soon look, as compared with a hurried or ill-considered sketch. In no process that I know of—least of all in sketching—can time be really gained by precipitation. It is gained only by caution ; and gained in all sorts of ways : for not only truth of form, but force of light, is always added by an intelligent and shapely laying of the shadow colours. You may often make a simple flat tint, rightly gradated and edged, express a complicated piece of subject without a single retouch. The two Swiss cottages, for instance, with their balconies, and glittering windows, and general character of shingly eaves, are expressed in Fig.30., with one tint of grey, and a few dispersed spots and lines of it ; all of which you ought to be able to lay on without more than thrice dipping your brush, and without a single touch after the tint is dry.

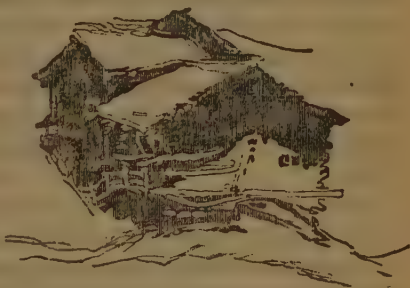


FIG. 30.

Here, then, for I cannot without coloured illustrations tell you more, I must leave you to follow out the subject for yourself, with such help as you may receive from the water-colour drawings accessible to you ; or from any of the little treatises on their art which have been published lately by our water-colour painters.* But do not trust much to works of this kind. You may get valuable hints from them as to mixture

* See, however, at the close of this letter, the notice of one more point connected with the management of colour, under the head "Law of Harmony."

of colours ; and here and there you will find a useful artifice or process explained ; but nearly all such books are written only to help idle amateurs to a meretricious skill, and they are full of precepts and principles which may, for the most part, be interpreted by their *precise* negatives, and then acted upon with advantage. Most of them praise boldness, when the only safe attendant spirit of a beginner is caution ;—advise velocity, when the first condition of success is deliberation ;—and plead for generalisation, when all the foundations of power must be laid in knowledge of specialty.

And now, in the last place, I have a few things to tell you respecting that dangerous nobleness of consummate art,—COMPOSITION. For though it is quite unnecessary for you yet awhile to attempt it, and it *may* be inexpedient for you to attempt it at all, you ought to know what it means, and to look for and enjoy it in the art of others.

Composition means, literally and simply, putting several things together, so as to make *one* thing out of them ; the nature and goodness of which they all have a share in producing. Thus a musician composes an air, by putting notes together in certain relations ; a poet composes a poem, by putting thoughts and words in pleasant order ; and a painter a picture, by putting thoughts, forms, and colours in pleasant order.

In all these cases, observe, an intended unity must be the result of composition. A paviour cannot be said to compose the heap of stones which he empties from his cart, nor the sower the handful of seed which he scatters from his hand. It is the essence of composition that everything should be in a determined place, perform an intended part, and act, in that part, advantageously for everything that is connected with it.

Composition, understood in this pure sense, is the type, in the arts of mankind, of the Providential government of the world.* It is an exhibition, in the order given to notes, or colours, or forms, of the advantage of perfect fellowship, dis-

* See farther, on this subject, "Modern Painters," vol. iv. chap. viii § 6.

cipline, and contentment. In a well-composed air, no note, however short or low, can be spared, but the least is as necessary as the greatest : no note, however prolonged, is tedious ; but the others prepare for, and are benefited by, its duration : no note, however high, is tyrannous ; the others prepare for and are benefited by, its exaltation : no note, however low, is overpowered, the others prepare for, and sympathise with, its humility : and the result is, that each and every note has a value in the position assigned to it, which by itself, it never possessed, and of which by separation from the others, it would instantly be deprived.

Similarly, in a good poem, each word and thought enhances the value of those which precede and follow it ; and every syllable has a loveliness which depends not so much on its abstract sound as on its position. Look at the same word in a dictionary, and you will hardly recognise it.

Much more in a great picture ; every line and colour is so arranged as to advantage the rest. None are inessential, however slight ; and none are independent, however forcible. It is not enough that they truly represent natural objects ; but they must fit into certain places, and gather into certain harmonious groups : so that, for instance, the red chimney of a cottage is not merely set in its place as a chimney, but that it may affect, in a certain way pleasurable to the eye, the pieces of green or blue in other parts of the picture ; and we ought to see that the work is masterly, merely by the positions and quantities of these patches of green, red, and blue, even at a distance which renders it perfectly impossible to determine what the colours represent : or to see whether the red is a chimney, or an old woman's cloak ; and whether the blue is smoke, sky, or water.

It seems to be appointed, in order to remind us, in all we do, of the great laws of Divine government and human polity, that composition in the arts should strongly affect every order of mind, however unlearned or thoughtless. Hence the popular delight in rhythm and metre, and in simple musical melodies. But it is also appointed that *power* of composition in the fine arts should be an exclusive attribute of great intellect.

All men can more or less copy what they see, and, more or less, remember it : powers of reflection and investigation are also common to us all, so that the decision of inferiority in these rests only on questions of *degree*. A. has a better memory than B., and C. reflects more profoundly than D. But the gift of composition is not given *at all* to more than one man in a thousand ; in its highest range, it does not occur above three or four times in a century.

It follows, from these general truths, that it is impossible to give rules which will enable you to compose. You might much more easily receive rules to enable you to be witty. If it were possible to be witty by rule, wit would cease to be either admirable or amusing : if it were possible to compose melody by rule, Mozart and Cimarosa need not have been born : if it were possible to compose pictures by rule, Titian and Veronese would be ordinary men. The essence of composition lies precisely in the fact of its being unteachable, in its being the operation of an individual mind of range and power exalted above others.

But though no one can *invent* by rule, there are some simple laws of arrangement which it is well for you to know, because, though they will not enable you to produce a good picture, they will often assist you to set forth what goodness may be in your work in a more telling way than you could have done otherwise ; and by tracing them in the work of good composers, you may better understand the grasp of their imagination, and the power it possesses over their materials. I shall briefly state the chief of these laws.

1. THE LAW OF PRINCIPALITY.

The great object of composition being always to secure unity ; that is, to make out of many things one whole ; the first mode in which this can be effected is, by determining that *one* feature shall be more important than all the rest, and that the others shall group with it in subordinate positions.

This is the simplest law of ordinary ornamentation. Thus the group of two leaves, *a*, Fig. 31., is unsatisfactory, because it has no leading leaf ; but that at *b* is prettier, because it has

a head or master leaf; and c more satisfactory still, because the subordination of the other members to this head leaf is made more manifest by their gradual loss of size as they fall back from it. Hence part of the pleasure we have in the Greek honeysuckle ornament, and such others.

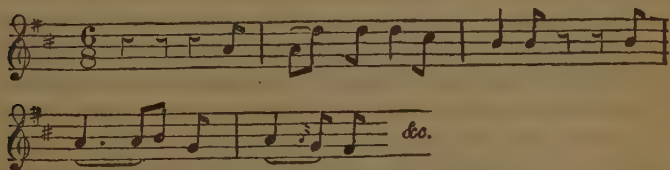


FIG. 31.

Thus, also, good pictures have always one light larger or brighter than the other lights, or one figure more prominent than the other figures, or one mass of colour dominant over all the other masses; and in general you will find it much benefit your sketch if you manage that there shall be one light on the cottage wall, or one blue cloud in the sky, which may attract the eye as leading light, or leading gloom, above all others. But the observance of the rule is often so cunningly concealed by the great composers, that its force is hardly at first traceable; and you will generally find that they are vulgar pictures in which the law is *strikingly* manifest. This may be simply illustrated by musical melody; for instance, in such phrases as this:



one note (here the upper G) rules the whole passage, and has the full energy of it concentrated in itself. Such passages, corresponding to completely subordinated compositions in painting, are apt to be wearisome if often repeated. But in such a phrase as this:



it is very difficult to say, which is the principal note. The A in the last bar is lightly dominant, but there is a very equal

current of power running through the whole ; and such passages rarely weary. And this principle holds through vast scales of arrangement ; so that in the grandest compositions, such as Paul Veronese's *Marriage in Cana*, or Raphael's *Disputa*, it is not easy to fix at once on the principal figure ; and very commonly the figure which is really chief does not catch the eye at first, but is gradually felt to be more and more conspicuous as we gaze. Thus in Titian's grand composition of the *Cornaro Family*, the figure meant to be principal is a youth of fifteen or sixteen, whose portrait it was evidently the painter's object to make as interesting as possible. But a grand *Madonna*, and a *St. George* with a drifting banner, and many figures more, occupy the centre of the picture, and first catch the eye ; little by little we are led away from them to a gleam of pearly light in the lower corner, and find that, from the head which it shines upon, we can turn our eyes no more.

As, in every good picture, nearly all laws of design are more or less exemplified, it will, on the whole, be an easier way of explaining them to analyse one composition thoroughly, than to give instances from various works. I shall therefore take one of Turner's simplest ; which will allow us, so to speak, easily to decompose it, and illustrate each law by it as we proceed.

Figure 32. is a rude sketch of the arrangement of the whole subject ; the old bridge over the Moselle at Coblenz, the town of Coblenz on the right, Ehrenbreitstein on the left. The leading or master feature is, of course the tower on the bridge. It is kept from being *too* principal by an important group on each side of it ; the boats, on the right, and Ehrenbreitstein beyond. The boats are large in mass, and more forcible in colour, but they are broken into small divisions, while the tower is simple, and therefore it still leads. Ehrenbreitstein is noble in its mass, but so reduced by aerial perspective of colour that it cannot contend with the tower, which therefore holds the eye, and becomes the key of the picture. We shall see presently how the very objects which seem at first to contend with it for the mastery are made, occultly to increase its preëminence.

2. THE LAW OF REPETITION.

Another important means of expressing unity is to mark some kind of sympathy among the different objects, and perhaps the pleasantest, because most surprising, kind of sympathy, is when one group imitates or repeats another ; not in the way of balance or symmetry, but subordinately, like a far-away and broken echo of it. Prout has insisted much on this law in all his writings on composition ; and I think it is even



FIG. 32.

more authoritatively present in the minds of most great composers than the law of principality. It is quite curious to see the pains that Turner sometimes takes to echo an important passage of colour ; in the Pembroke Castle for instance, there are two fishing-boats, one with a red, and another with a white sail. In a line with them, on the beach, are two fish in precisely the same relative positions ; one red and one white. It is observable that he uses the artifice chiefly in pictures where he wishes to obtain an expression of repose : in my notice of the plate of Scarborough, in the series of the "Harbours of England," I have already had occasion to dwell on this point ;

and I extract in the note* one or two sentences which explain the principle. In the composition I have chosen for our illustration, this reduplication is employed to a singular extent. The tower, or leading feature, is first repeated by the low echo of it to the left; put your finger over this lower tower, and see how the picture is spoiled. Then the spires of Coblenz are all arranged in couples (how they are arranged in reality does not matter; when we are composing a great picture, we must play the towers about till they come right, as fearlessly as if they were chessmen instead of cathedrals). The dual arrangement of these towers would have been too easily seen, were it not for a little one which pretends to make a triad of the last group on the right, but is so faint as hardly to be discernible: it just takes off the attention from the artifice, helped in doing so by the mast at the head of the boat, which, however, has instantly its own duplicate put at the stern.† Then there is the large boat near, and its echo beyond it. That echo is divided into two again, and each of those two smaller boats has two figures in it; while two figures are also sitting together on the great rudder that lies half in the water, and half aground. Then, finally, the great mass of Ehrenbreitstein, which appears at first to have no answering form, has almost its *fac-simile* in the bank on which the girl is sitting; this bank is as absolutely essential to the completion of the picture as any object in the whole series. All this is done to deepen the effect of repose.

Symmetry or the balance of parts or masses in nearly equal opposition, is one of the conditions of treatment under the

* "In general, throughout Nature, reflection and repetition are peaceful things, associated with the idea of quiet succession in events, that one day should be like another day, or one history the repetition of another history, being more or less results of quietness, while dissimilarity and non-succession are results of interference and disquietude. Thus, though an echo actually increases the quantity of sound heard, its repetition of the note or syllable gives an idea of calmness attainable in no other way; hence also the feeling of calm given to a landscape by the voice of a cuckoo."

† This is obscure in the rude woodcut, the masts being so delicate that they are confused among the lines of reflection. In the original they have orange light upon them, relieved against purple behind.

law of Repetition. For the opposition, in a symmetrical object, is of like things reflecting each other ; it is not the balance of contrary natures (like that of day and night) but of like natures or like forms ; one side of a leaf being set like the reflection of the other in water.

Symmetry in Nature is, however, never formal nor accurate. She takes the greatest care to secure some difference between the corresponding things or parts of things ; and an approximation to accurate symmetry is only permitted in animals because their motions secure perpetual difference between the balancing parts. Stand before a mirror ; hold your arms in precisely the same position at each side, your head upright your body straight ; divide your hair exactly in the middle, and get it as nearly as you can into exactly the same shape over each ear, and you will see the effect of accurate symmetry ; you will see, no less, how all grace and power in the human form result from the interference of motion and life with symmetry, and from the reconciliation of its balance with its changefulness. Your position, as seen in the mirror, is the highest type of symmetry as understood by modern architects.

In many sacred compositions, living symmetry, the balance of harmonious opposites, is one of the profoundest sources of their power : almost any works of the early painters, Angelico, Perugino, Giotto, &c., will furnish you with notable instances of it. The Madonna of Perugino in the National Gallery, with the angel Michael on one side and Raphael on the other, is as beautiful an example as you can have.

In landscape, the principle of balance is more or less carried out, in proportion to the wish of the painter to express disciplined calmness. In bad compositions as in bad architecture, it is formal, a tree on one side answering a tree on the other ; but in good compositions, as in graceful statues, it is always easy, and sometimes hardly traceable. In the Colblentz, however, you cannot have much difficulty in seeing how the boats on one side of the tower and the figures on the other are set in nearly equal balance ; the tower, as a central mass uniting both.

3. THE LAW OF CONTINUITY.

Another important and pleasurable way of expressing unity, is by giving some orderly succession to a number of objects more or less similar. And this succession is most interesting when it is connected with some gradual change in the aspect or character of the objects. Thus the succession of the pillars of a cathedral aisle is most interesting when they retire in perspective, becoming more and more obscure in distance ; so the succession of mountain promontories one behind another, on the flanks of a valley ; so the succession of clouds, fading farther and farther towards the horizon ; each promontory and each cloud being of different shape, yet all evidently following in a calm and appointed order. If there be no change at all in the shape or size of the objects, there is no continuity ; there is only repetition—monotony. It is the change in shape which suggests the idea of their being individually free, and able to escape, if they liked, from the law that rules them, and yet submitting to it. I will leave our chosen illustrative composition for a moment to take up another, still more expressive of this law. It is one of Turner's most tender studies, a sketch on Calais Sands at sunset ; so delicate in the expression of wave and cloud, that it is of no use for me to try to reach it with any kind of outline in a woodcut ; but the rough sketch, Fig. 33., is enough to give an idea of its arrangement. The aim of the painter has been to give the intensest expression of repose, together with the enchanted lulling, monotonous motion of cloud and wave. All the clouds are moving in innumerable ranks after the sun, meeting towards the point in the horizon where he has set ; and the tidal waves gain in winding currents upon the sand, with that stealthy haste in which they cross each other so quietly, at their edges : just folding one over another as they meet, like a little piece of ruffled silk, and leaping up a little as two children kiss and clap their hands, and then going on again, each in its silent hurry, drawing pointed arches on the sand as their thin edges intersect in parting ; but all this would not have been enough expressed without the line of the old pier-timbers, black with

weeds, strained and bent by the storm waves, and now seeming to stoop in following one another, like dark ghosts escaping slowly from the cruelty of the pursuing sea.

I need not, I hope, point out to the reader the illustration of this law of continuance in the subject chosen for our general illustration. It was simply that gradual succession of the retiring arches of the bridge which induced Turner to paint the subject at all ; and it was this same principle which led him always to seize on subjects including long bridges wherever he could find them ; but especially, observe, unequal



FIG. 33.

bridges, having the highest arch at one side rather than at the centre. There is a reason for this, irrespective of general laws of composition, and connected with the nature of rivers, which I may as well stop a minute to tell you about, and let you rest from the study of composition.

All rivers, small or large, agree in one character, they like to lean a little on one side : they cannot bear to have their channels deepest in the middle, but will always, if they can, have one bank to sun themselves upon, and another to get cool under ; one shingly shore to play over, where they may be shallow, and foolish, and childlike, and another steep shore, under which they can pause, and purify themselves, and get

their strength of waves fully together for due occasion. Rivers in this way are just like wise men, who keep one side of their life for play, and another for work ; and can be brilliant, and chattering, and transparent, when they are at ease, and yet take deep counsel on the other side when they set themselves to their main purpose. And rivers are just in this divided, also, like wicked and good men : the good rivers have serviceable deep places all along their banks, that ships can sail in ; but the wicked rivers go scoopingly irregularly under their banks until they get full of strangling eddies, which no boat can row over without being twisted against the rocks ; and pools like wells, which no one can get out of but the water-kelpie that lives at the bottom ;—but, wicked or good, the rivers all agree in having two kinds of sides. Now the natural way in which a village stonemason therefore throws a bridge over a strong stream is, of course, to build a great door to let the cat through, and little doors to let the kittens through ; a great arch for the great current, to give it room in flood time, and little arches for the little currents along the shallow shore. This, even without any prudential respect for the floods of the great current, he would do in simple economy of work and stone ; for the smaller your arches are, the less material you want on their flanks. Two arches over the same span of river, supposing the buttments are at the same depth, are cheaper than one, and that by a great deal ; so that, where the current is shallow, the village mason makes his arches many and low ; as the water gets deeper, and it becomes troublesome to build his piers up from the bottom, he throws his arches wider ; at last he comes to the deep stream, and, as he cannot build at the bottom of that, he throws his largest arch over it with a leap, and with another little one or so gains the opposite shore. Of course as arches are wider they must be higher, or they will not stand ; so the roadway must rise as the arches widen. And thus we have the general type of bridge, with its highest and widest arch towards one side, and a train of minor arches running over the flat shore on the other ; usually a steep bank at the river-side next the large arch ; always, of course, a flat shore on

the side of the small ones ; and the bend of the river assuredly concave towards this flat, cutting round, with a sweep into the steep bank ; or, if there is no steep bank, still assuredly cutting into the shore at the steep end of the bridge.

Now this kind of bridge, sympathising, as it does, with the spirit of the river, and marking the nature of the thing it has to deal with and conquer, is the ideal of a bridge ; and all endeavours to do the thing in a grand engineer's manner, with a level roadway and equal arches, are barbarous ; not only because all monotonous forms are ugly in themselves, but because the mind perceives at once that there has been cost uselessly thrown away for the sake of formality.*

Well, to return to our continuity. We see that the Turnerian bridge in Fig. 32. is of the absolutely perfect type, and is still farther interesting by having its main arch crowned by a watch-tower. But as I want you to note especially what perhaps was not the case in the real bridge, but is entirely Turner's doing, you will find that though the arches diminish gradually, not one is *regularly* diminished—they are all of

* The cost of art in getting a bridge level is *always* lost, for you must get up to the height of the central arch at any rate, and you only can make the whole bridge level by putting the hill farther back, and pretending to have got rid of it when you have not, but have only wasted money in building an unnecessary embankment. Of course, the bridge should not be difficultly or dangerously steep, but the necessary slope, whatever it may be, should be in the bridge itself, as far as the bridge can take it, and not pushed aside into the approach, as in our Waterloo road ; the only rational excuse for doing which is that when the slope must be long it is inconvenient to put on a drag at the top of the bridge, and that any restiveness of the horse is more dangerous on the bridge than on the embankment. To this I answer : first, it is not more dangerous in reality, though it looks so, for the bridge is always guarded by an effective parapet, but the embankment is sure to have no parapet, or only a useless rail ; and secondly, that it is better to have the slope on the bridge, and make the roadway wide in proportion, so as to be quite safe, because a little waste of space on the river is no loss, but your wide embankment at the side loses good ground ; and so my picturesque bridges are right as well as beautiful, and I hope to see them built again some day, instead of the frightful straight-backed things which we fancy are fine, and accept from the pontifical rigidities of the engineering mind.

different shapes and sizes : you cannot see this clearly in Fig. 32., but in the larger diagram, Fig. 34., opposite, you will with ease. This is indeed also part of the ideal of a bridge, because the lateral currents near the shore are of course irregular in size, and a simple builder would naturally vary his arches accordingly ; and also, if the bottom was rocky, build his piers where the rocks came. But it is not as a part of bridge ideal, but as a necessity of all noble composition, that this irregularity is introduced by Turner. It at once raises the object thus treated from the lower or vulgar unity of rigid law to the greater unity of clouds, and waves, and trees, and human souls, each different, each obedient, and each in harmonious service.

4. THE LAW OF CURVATURE.

There is, however, another point to be noticed in this bridge of Turner's. Not only does it slope away unequally at its sides, but it slopes in a gradual though very subtle curve. And if you substitute a straight line for this curve (drawing one with a rule from the base of the tower on each side to the ends of the bridge, in Fig. 34., and effacing the curve), you will instantly see that the design has suffered grievously. You may ascertain, by experiment, that all beautiful objects whatsoever are thus terminated by delicately curved lines, except where the straight line is indispensable to their use or stability : and that when a complete system of straight lines, throughout the form, is necessary to that stability, as in crystals, the beauty, if any exists, is in colour and transparency, not in form. Cut out the shape of any crystal you like, in white wax or wood, and put it beside a white lily, and you will feel the force of the curvature in its purity, irrespective of added colour, or other interfering elements of beauty.

Well, as curves are more beautiful than straight lines, it is necessary to a good composition that its continuities of object, mass, or colour should be, if possible, in curves, rather than straight lines or angular ones. Perhaps one of the simplest and prettiest examples of a graceful continuity of this kind is in the line traced at any moment by the corks of a net as it



FIG. 34.

is being drawn: nearly every person is more or less attracted by the beauty of the dotted line. Now it is almost always possible, not only to secure such a continuity in the arrangement or boundaries of objects which, like these bridge arches or the corks of the net, are actually connected with each other, but—and this is a still more noble and interesting kind of continuity—among features which appear at first entirely separate. Thus the towers of Ehrenbreitstein, on the left, in Fig. 32., appear at first independent of each other; but when

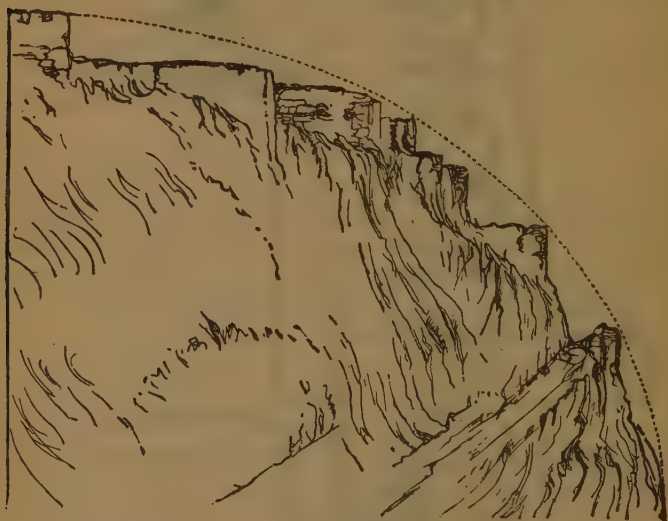


FIG. 35.

I give their profile, on a larger scale, Fig. 35., the reader may easily perceive that there is a subtle cadence and harmony among them. The reason of this is, that they are all bounded by one grand curve, traced by the dotted line; out of the seven towers, four precisely touch this curve, the others only falling back from it here and there to keep the eye from discovering it too easily.

And it is not only always *possible* to obtain continuities of this kind: it is, in drawing large forest or mountain forms es-

sential to truth. The towers of Ehrenbreitstein might or might not in reality fall into such a curve, but assuredly the basalt rock on which they stand did; for all mountain forms not cloven into absolute precipice, nor covered by straight slopes of shales, are more or less governed by these great curves, it being one of the aims of Nature in all her work to produce them. The reader must already know this, if he has been able to sketch at all among the mountains; if not, let him merely draw for himself, carefully, the outlines of any low hills accessible to him, where they are tolerably steep, or of the woods which grow on them. The steeper shore of the Thames at Maidenhead, or any of the downs at Brighton or Dover, or, even nearer, about Croydon (as Addington Hills), are easily accessible to a Londoner; and he will soon find not only how constant, but how graceful the curvature is. Graceful curvature is distinguished from ungraceful by two characters: first, its moderation, that is to say, its close approach to straightness in some parts of its course;* and, secondly, by its variation, that is to say, its never remaining equal in degree at different parts of its course.

This variation is itself twofold in all good curves.

A. There is, first, a steady change through the whole line from less to more curvature, or more to less, so that *no* part



FIG. 36.

of the line is a segment of a circle, or can be drawn by compasses in any way whatever. Thus, in Fig. 36., *a* is a bad curve, because it is part of a circle, and is therefore monotonous throughout; but *b* is a good curve, because it continually changes its direction as it proceeds.

* I cannot waste space here by reprinting what I have said in other books: but the reader ought, if possible, to refer to the notices of this part of our subject in "Modern Painters," vol. iv. chap. xvii.; and "Stones of Venice," vol. iii. chap. i. § 8.

The *first* difference between good and bad drawing of tree boughs consists in observance of this fact. Thus, when I put



FIG. 37.

leaves on the line *b*, as in Fig. 37., you can immediately feel the springiness of character dependent on the changefulness of the curve. You may put leaves on the other line for yourself, but you will find you cannot make a right tree spray of it. For *all* tree boughs, large or small, as well as all noble natural lines whatsoever, agree in this character; and it is a point of primal necessity that your eye should always seize and your hand trace it. Here are two more portions of good curves, with leaves put on them at the extremities instead of the flanks, Fig. 38.; and two showing the arrangement of masses of foliage seen a little farther off, Fig. 39., which you may in like manner amuse yourself by turning into segments of circles—you will see with what result. I hope, however, you have



FIG. 38.



FIG. 39.

carefully made, in which you may study variations of curvature in their most complicated and lovely forms.*

B. Not only does every good curve vary in general tendency, but it is modulated, as it proceeds, by myriads of subordinate curves. Thus the outlines of a tree trunk are never as at *a*, Fig. 40, but as at *b*. So also in waves, clouds, and all other nobly formed masses. Thus another essential difference between good and bad drawing, or good and bad sculpture, depends on the quantity and refinement

* If you happen to be reading at this part of the book, without having gone through any previous practice, turn back to the sketch of the

of minor curvatures carried, by good work, into the great lines. Strictly speaking, however, this is not variation in large curves, but composition of large curves out of small ones ; it is an increase in the quantity of the beautiful element, *but not a change in its nature.*

5. THE LAW OF RADIATION.

We have hitherto been concerned only with the binding of our various objects into beautiful lines or processions. The next point we have to consider is, how we may unite these lines or processions themselves, so as to make groups of *them*.

Now, there are two kinds of harmonies of lines. One in which, moving more or less side by side, they variously, but evidently with consent, retire from or approach each other, intersect or oppose each other : currents of melody in music, for different voices, thus approach and cross, fall and rise, in harmony ; so the waves of the sea, as they approach the shore, flow into one another or cross, but with a great unity through all ; and so various lines of composition often flow harmoniously through and across each other in a picture. But the most simple and perfect connexion of lines is by radiation ; that is, by their all springing from one point, or closing towards it : and this harmony is often, in Nature almost always, united with the other ; as the boughs of trees, though they intersect and play amongst each other irregularly, indicate by their general tendency their origin from one root. An essential part of the beauty of all vegetable form is in this radiation : it is seen most simply in a single flower or leaf, as in a convolvulus ramification of stone pine, Fig. 4. page 30., and examine the curves of its boughs one by one, trying them by the conditions here stated under the heads A. and B.



FIG. 40.

bell, or chestnut leaf; but more beautifully in the complicated arrangements of the large boughs and sprays. For a leaf is only a flat piece of radiation; but the tree throws its branches on all sides, and even in every profile view of it, which presents a radiation more or less correspondent to that of its leaves, it is more beautiful, because varied by the freedom of the separate branches. I believe it has been ascertained that, in all trees, the angle at which, in their leaves, the lateral ribs are set on their central rib is approximately



FIG. 41.

the same at which the branches leave the great stem; and thus each section of the tree would present a kind of magnified view of its own leaf, were it not for the interfering force of gravity on the masses of foliage. This force in proportion to their age, and the lateral leverage upon them, bears them downwards at the extremities, so that, as before noticed, the lower the bough grows on the stem, the more it droops (Fig. 17, p. 70.); besides this, nearly all

beautiful trees have a tendency to divide into two or more principal masses, which give a prettier and more complicated symmetry than if one stem ran all the way up the centre. Fig. 41. may thus be considered the simplest type of tree radiation, as opposed to leaf radiation. In this figure, however, all secondary ramification is unrepresented, for the sake of simplicity; but if we take one half of such a tree, and merely give two secondary branches to each main branch (as represented in the general branch structure shown at *b*, Fig. 18., p. 78), we shall have the form, Fig. 42. This I consider the perfect general type of tree structure; and it is curiously connected with certain forms of Greek, Byzantine, and Gothic ornamentation, into the discussion of which, however, we must not enter here. It will be observed, that both in Figs. 41. and 42. all the branches so spring from the main stem as very nearly to suggest their united radiation from the root *r*. This is by no means universally



FIG. 42.

the case ; but if the branches do not bend towards a point in the root, they at least converge to some point or other. In the examples in Fig. 43., the mathematical centre of curvature, *a*, is thus, in one case, on the ground at some distance from the root, and in the other, near the top of the tree. Half, only, of each tree is given, for the sake of clearness : Fig. 44 gives both sides of another example, in which the origins of curvature are below the root.

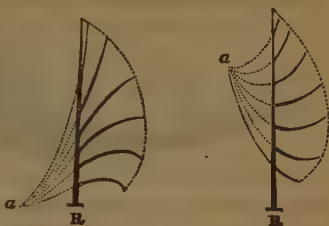


FIG. 43.

As the positions of such points may be varied without end, and as the arrangement of the lines is also farther complicated by the fact of the boughs springing for the most part in a spiral order round the tree, and at proportionate distances, the systems of curvature which regulate the form of vegetation are quite infinite. Infinite is a word easily said, and easily written, and people do not always mean it when they say it ; in this case I *do* mean it ; the number of systems is incalculable, and even to furnish any thing like a representative number of types, I should have to give several hundreds of figures such as Fig. 44.*



FIG. 44.

Thus far, however, we have only been speaking of the great relations of stem and branches. The forms of the branches themselves are regulated by still more subtle laws, for they occupy an intermediate position between the form of the tree and of the leaf. The leaf has a flat ramification ; the tree a completely rounded one ; the bough is neither rounded nor flat, but has a structure exactly balanced between the two, in a half-flattened, half-rounded flake, closely resembling in shape one of the thick leaves of an artichoke or the flake of a fir cone ; by combination forming the solid mass of the tree, as the

* The reader, I hope, observes always that every line in these figures is itself one of varying curvature, and cannot be drawn by compasses.

leaves compose the artichoke head. I have before pointed out to you the general resemblance of these branch flakes to an extended hand ; but they may be more accurately represented by the ribs of a boat. If you can imagine a very broad-headed

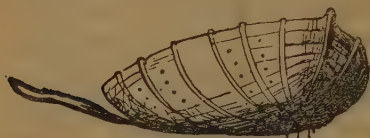


FIG. 45.

and flattened boat applied by its keel to the end of a main branch,* as in Fig. 45., the lines which its ribs will take, and the general contour of it, as seen in dif-

ferent directions, from above and below ; and from one side and another, will give you the closest approximation to the perspectives and foreshortenings of a well-grown branch-flake. Fig. 25. above, page 98., is an unharmed and unrestrained shoot of healthy young oak ; and if you compare it with Fig. 45., you will understand at once the action of the lines of leafage ; the boat only failing as a type in that its ribs are too nearly parallel to each other at the sides, while the bough sends all its ramification well forwards, rounding to the head, that it may accomplish its part in the outer form of the whole tree, yet always securing the compliance with the great universal law that the branches nearest the root bend most back ; and, of course, throwing some always back as well as forwards ; the appearance of reversed action being much increased, and rendered more striking and beautiful, by perspective. Figure 25. shows the perspective of such a bough as it is seen from below ; Fig. 46. gives rudely the look it would have from above.

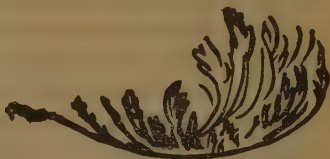


FIG. 46.

You may suppose, if you have not already discovered, what

* I hope the reader understands that these woodcuts are merely facsimiles of the sketches I make at the side of my paper to illustrate my meaning as I write—often sadly scrawled if I want to get on to something else. This one is really a little too careless ; but it would take more time and trouble to make a proper drawing of so odd a boat than the matter is worth. It will answer the purpose well enough as it is.

subtleties of perspective and light and shade are involved in the drawing of these branch-flakes, as you see them in different directions and actions; now raised, now depressed; touched on the edges by the wind, or lifted up and bent back so as to show all the white under surfaces of the leaves shivering in light, as the bottom of a boat rises white with spray at the surge-crest; or drooping in quietness towards the dew of the grass beneath them in windless mornings, or bowed down under oppressive grace of deep-charged snow. Snow time, by the way, is one of the best for practice in the placing of tree masses; but you will only be able to understand them thoroughly by beginning with a single bough and a few leaves placed tolerably even, as in Fig. 38. page 154. First one with three leaves, a central and two lateral ones, as at *a*; then with five, as at *b*, and so on; directing your whole attention to the expression, both by contour and light and shade, of the boat-like arrangements, which in your earlier studies, will have been a good deal confused, partly owing to your inexperience, and partly to the depth of shade, or absolute blackness of mass required in those studies.

One thing more remains to be noted, and I will let you out of the wood. You see that in every generally representative figure I have surrounded the radiating branches with a dotted line: such lines do indeed terminate every vegetable form; and you see that they are themselves beautiful curves, which, according to their flow, and the width or narrowness of the spaces they enclose, characterize the species of tree or leaf, and express its free or formal action, its grace of youth or weight of age. So that, throughout all the freedom of her wildest foliage, Nature is resolved on expressing an encompassing limit; and marking a unity in the whole tree, caused not only by the rising of its branches from a common root, but by their joining in one work, and being bound by a common law. And having ascertained this, let us turn back for a moment to a point in leaf structure which, I doubt not, you must already have observed in your earlier studies, but which it is well to state here, as connected with the unity of the branches in the great trees. You must have noticed, I should

think, that whenever a leaf is compound,—that is to say, divided into other leaflets which in any way repeat or imitate the form of the whole leaf,—those leaflets are not symmetrical, as the whole leaf is, but always smaller on the side towards the point of the great leaf, so as to express their subordination to it, and show, even when they are pulled off, that they are not small independent leaves, but members of one large leaf.

Fig. 47., which is a block-plan of a leaf of columbine, without its minor divisions on the edges, will illustrate the principle clearly. It is composed of a central large mass, A, and two lateral ones, of which the one on the right only is lettered,

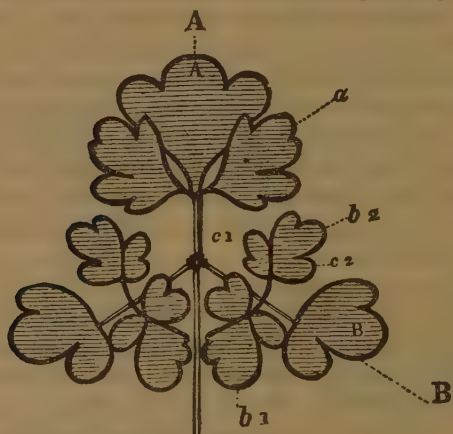


FIG. 47.

B. Each of these masses is again composed of three others, a central and two lateral ones; but observe, the minor one, *a* of A, is balanced equally by its opposite; but the minor *b 1* of B is larger than its opposite *b 2*. Again, each of these minor masses is divided into three; but while the central mass, *a* of A, is symmetrically divided, the *B* of B is unsymmetrical, its largest side-lobe being lowest. Again *b 2*, the lobe *c 1* (its lowest lobe in relation to *B*) is larger than *c 2*; and so also in *b 1*. So that universally one lobe of a lateral leaf is always larger than the other, and the smaller lobe is that which is nearer the central mass; the lower leaf, as it

were by courtesy, subduing some of its own dignity or power, in the immediate presence of the greater or captain leaf ; and always expressing, therefore, its own subordination and secondary character. This law is carried out even in single leaves. As far as I know, the upper half, towards the point of the spray, is always the smaller ; and a slightly different curve, more convex at the springing, is used for the lower side, giving an exquisite variety to the form of the whole leaf ; so that one of the chief elements in the beauty of every subordinate leaf throughout the tree, is made to depend on its confession of its own lowliness and subjection.

And now, if we bring together in one view the principles we have ascertained in trees, we shall find they may be summed under four great laws ; and that all perfect* vegetable form is appointed to express these four laws in noble balance of authority.

1. Support from one living root.

2. Radiation, or tendency of force from some one given point, either in the root, or in some stated connexion with it.

3. Liberty of each bough to seek its own livelihood and happiness according to its needs, by irregularities of action both in its play and its work, either stretching out to get its required nourishment from light and rain, by finding some sufficient breathing-place among the other branches, or knotting and gathering itself up to get strength for any load which its fruitful blossoms may lay upon it, and for any stress of its storm-tossed luxuriance of leaves ; or playing hither and thither as the fitful sunshine may tempt its young shoots, in their undecided states of mind about their future life.

4. Imperative requirement of each bough to stop within certain limits, expressive of its kindly fellowship and frater-

* Imperfect vegetable form I consider that which is in its nature dependent, as in runners and climbers ; or which is susceptible of continual injury without materially losing the power of giving pleasure by its aspect, as in the case of the smaller grasses. I have not, of course, space here to explain these minor distinctions, but the laws above stated apply to all the more important trees and shrubs likely to be familiar to the student.

nity with the boughs in its neighborhood ; and to work with them according to its power, magnitude, and state of health, to bring out the general perfectness of the great curve, and circumferent stateliness of the whole tree.

I think I may leave you, unhelped, to work out the moral analogies of these laws ; you may, perhaps, however, be a little puzzled to see the meeting of the second one. It typically expresses that healthy human actions should spring radiantly (like rays) from some single heart motive ; the most beautiful systems of action taking place when this motive lies at the root of the whole life, and the action is clearly seen to proceed from it ; while also many beautiful secondary systems of action taking place from motives not so deep or central, but in some beautiful subordinate connexion with the central or life motive.

The other laws, if you think over them, you will find equally significative ; and as you draw trees more and more in their various states of health and hardship, you will be every day more struck by the beauty of the types they present of the truths most essential for mankind to know ;* and you will see what this vegetation of the earth, which is necessary to our life, first, as purifying the air for us and then as food, and just as necessary to our joy in all places of the earth,—what these trees and leaves, I say, are meant to teach us as we contemplate them, and read or hear their lovely language, written or spoken for us, not in frightful black letters, nor in dull sen-

* There is a very tender lesson of this kind in the shadows of leaves upon the ground ; shadows which are the most likely of all to attract attention, by their pretty play and change. If you examine them, you will find that the shadows do not take the forms of the leaves, but that, through each interstice, the light falls, at a little distance, in the form of a round or oval spot ; that is to say, it produces the image of the sun itself, cast either vertically or obliquely, in circle or ellipse according to the slope of the ground. Of course the sun's rays produce the same effect, when they fall through any small aperture : but the openings between leaves are the only ones likely to show it to an ordinary observer, or to attract his attention to it by its frequency, and lead him to think what this type may signify respecting the greater Sun ; and how it may show us that, even when the opening through which the earth receives light is too small to let us see the Sun himself, the ray of light that enters, if it comes straight from Him, will still bear with it His image.

tences, but in fair green and shadowy shapes of waving words, and blossomed brightness of odoriferous wit, and sweet whispers of unintrusive wisdom, and playful morality.

Well, I am sorry myself to leave the wood, whatever my reader may be ; but leave it we must, or we shall compose no more pictures to-day.

This law of radiation, then, enforcing unison of action in arising from, or proceeding to, some given point, is perhaps, of all principles of composition, the most influential in producing the beauty of groups of form. Other laws make them forcible or interesting, but this generally is chief in rendering them beautiful. In the arrangement of masses in pictures, it is constantly obeyed by the great composers ; but, like the law of principality, with careful concealment of its imperative-ness, the point to which the lines of main curvature are directed being very often far away out of the picture. Sometimes, however, a system of curves will be employed definitely to exalt, by their concurrence, the value of some leading object, and then the law becomes traceable enough.

In the instance before us, the principal object being, as we have seen, the tower on the bridge, Turner has determined that his system of curvature should have its origin in the top of this tower. The diagram Fig. 34. page 151, compared with Fig. 32. page 143, will show how this is done. One curve joins the two towers, and is continued by the back of the figure sitting on the bank into the piece of bent timber. This is a limiting curve of great importance, and Turner has drawn a considerable part of it with the edge of the timber very carefully, and then led the eye up to the sitting girl by some white spots and indications of a ledge in the bank ; then the passage to the tops of the towers cannot be missed.

The next curve is begun and drawn carefully for half an inch of its course by the rudder ; it is then taken up by the basket and the heads of the figures, and leads accurately to the tower angle. The gunwales of both the boats begin the next two curves, which meet in the same point ; and all are centralised by the long reflection which continues the vertical lines.

Subordinated to this first system of curves there is another,

begun by the small crossing bar of wood inserted in the angle behind the rudder ; continued by the bottom of the bank on which the figure sits, interrupted forcibly beyond it,* but taken up again by the water-line leading to the bridge foot, and passing on in delicate shadows under the arches, not easily shown in so rude a diagram, towards the other extremity of the bridge. This is a most important curve, indicating that the force and sweep of the river have indeed been in old times under the large arches ; while the antiquity of the bridge is told us by the long tongue of land, either of carted rubbish, or washed down by some minor stream, which has interrupted this curve, and is now used as a landing-place for the boats, and for embarkation of merchandise, of which some bales and bundles are laid in a heap, immediately beneath the great tower. A common composer would have put these bales to one side or the other, but Turner knows better ; he uses them as a foundation for his tower, adding to its importance precisely as the sculptured base adorns a pillar ; and he farther increases the aspect of its height by throwing the reflection of it far down in the nearer water. All the great composers have this same feeling about sustaining their vertical masses : you will constantly find Prout using the artifice most dexterously (see, for instance, the figure with the wheelbarrow under the great tower, in the sketch of St. Nicolas, at Prague, and the white group of figures under the tower in the sketch of Augsburg †) ; and Veronese, Titian, and Tintoret continually put their principal figures at bases of pillars. Turner found out their secret very early, the most prominent instance of his composition on this principle being the drawing of Turin from the Superga, in Hakewell's Italy.

* In the smaller figure (32.), it will be seen that this interruption is caused by a cart coming down to the water's edge ; and this object is serviceable as beginning another system of curves leading out of the picture on the right, but so obscurely drawn as not to be easily represented in outline. As it is unnecessary to the explanation of our point here, it has been omitted in the larger diagram, the direction of the curve it begins being indicated by the dashes only.

† Both in the Sketches in Flanders and Germany.

I chose Fig. 20., already given to illustrate foliage drawing, chiefly because, being another instance of precisely the same arrangement, it will serve to convince you of its being intentional. There, the vertical, formed by the larger tree, is continued by the figure of the farmer, and that of one of the smaller trees by his stick. The lines of the interior mass of the bushes radiate, under the law of radiation, from a point behind the farmer's head ; but their outline curves are carried on and repeated, under the law of continuity, by the curves of the dog and boy—by the way, note the remarkable instance in these of the use of darkest lines towards the light ;—all more or less guiding the eye up to the right, in order to bring it finally to the Keep of Windsor, which is the central object of the picture, as the bridge tower is in the Coblentz. The wall on which the boy climbs answers the purpose of contrasting, both in direction and character, with these greater curves ; thus corresponding as nearly as possible to the minor tongue of land in the Coblentz. This, however, introduces us to another law, which we must consider separately.

6. THE LAW OF CONTRAST.

Of course the character of everything is best manifested by Contrast. Rest can only be enjoyed after labour ; sound, to be heard clearly, must rise out of silence ; light is exhibited by darkness, darkness by light ; and so on in all things. Now in art every colour has an opponent colour, which, if brought near it, will relieve it more completely than any other ; so, also, every form and line may be made more striking to the eye by an opponent form or line near them ; a curved line is set off by a straight one, a massy form by a slight one, and so on ; and in all good work nearly double the value, which any given colour or form would have uncombined, is given to each by contrast.*

* If you happen to meet with the plate of Durer's representing a coat of arms with a skull in the shield, note the value given to the concave curves and sharp point of the helmet by the convex leafage carried round it in front ; and the use of the blank white part of the shield in opposing the rich folds of the dress.

In this case again, however, a too manifest use of the artifice vulgarises a picture. Great painters do not commonly, or very visibly, admit violent contrast. They introduce it by stealth and with intermediate links of tender change; allowing, indeed, the opposition to tell upon the mind as a surprise, but not as a shock.*

Thus in the rock of Ehrenbreitstein, Fig. 35., the main current of the lines being downwards, in a convex swell, they are suddenly stopped at the lowest tower by a counter series of beds, directed nearly straight across them. This adverse force sets off and relieves the great curvature, but it is reconciled to it by a series of radiating lines below, which at first sympathize with the oblique bar, then gradually get steeper, till they meet and join in the fall of the great curve. No passage, however intentionally monotonous, is ever introduced by a good artist without *some* slight counter current of this kind; so much, indeed, do the great composers feel the necessity of it, that they will even do things purposely ill or unsatisfactorily, in order to give greater value to their well-doing in other places. In a skilful poet's versification the so-called bad or inferior lines are not inferior because he could not do them better, but because he feels that if all were equally weighty, there would be no real sense of weight anywhere; if all were equally melodious, the melody itself would be fatiguing; and he purposely introduces the labouring or discordant verse, that the full ring may be felt in his main sentence, and the finished sweetness in his chosen rhythm.† And continually in painting, inferior artists destroy their work by giving too much

* Turner hardly ever, as far as I remember, allows a strong light to oppose a full dark, without some intervening tint. His suns never set behind dark mountains without a film of cloud above the mountain's edge.

† "A prudent chief not always must display
His powers in equal ranks and fair array,
But with the occasion and the place comply,
Conceal his force; nay, seem sometimes to fly.
Those oft are stratagems which errors seem,
Nor is it Homer nods, but we that dream."

Essay on Criticism.

of all that they think is good, while the great painter gives just enough to be enjoyed, and passes to an opposite kind of enjoyment, or to an inferior state of enjoyment: he gives a passage of rich, involved, exquisitely wrought colour, then passes away into slight, and pale and simple colour; he paints for a minute or two with intense decision, then suddenly becomes, as the spectator thinks, slovenly; but he is not slovenly: you could not have *taken* any more decision from him just then; you have had as much as is good for you; he paints over a great space of his picture forms of the most rounded and melting tenderness, and suddenly, as you think by a freak,



FIG. 48.

gives you a bit as jagged and sharp as a leafless blackthorn. Perhaps the most exquisite piece of subtle contrast in the world of painting is the arrow point, laid sharp against the white side and among the flowing hair of Correggio's Antiope. It is quite singular how very little contrast will sometimes serve to make an entire group of forms interesting which would otherwise have been valueless. There is a good deal of picturesque material, for instance, in this top of an old tower, Fig. 48., tiles and stones and sloping roof not disagreeably mingled; but all would have been unsatisfactory if there had not happened to be that iron ring on the inner wall, which by its

vigorous black *circular* line precisely opposes all the square and angular characters of the battlements and roof. Draw the tower without the ring, and see what a difference it will make.

One of the most important applications of the law of contrast is in association with the law of continuity, causing an unexpected but gentle break in a continuous series. This artifice is perpetual in music, and perpetual also in good illumination; the way in which little surprises of change are prepared in any current borders, or chains of ornamental design, being one of the most subtle characteristics of the work of the good periods. We take, for instance, a bar of ornament between two written columns of an early 14th century MS., and at the first glance we suppose it to be quite monotonous all the way up, composed of a winding tendril, with alternately a blue leaf and a scarlet bud. Presently, however, we see that, in order to observe the law of principality there is one large scarlet leaf instead of a bud, nearly half-way up, which forms a centre to the whole rod; and when we begin to examine the order of the leaves, we find it varied carefully. Let *a* stand for scarlet bud, *b* for blue leaf, *c* for two blue leaves on one stalk, *s* for a stalk without a leaf, and *r* for the large red leaf. Then counting from the ground, the order begins as follows:

b, b, a; b, s, b, a; b, b, a; b, b, a; and we think we shall have two *b*'s and an *a* all the way, when suddenly it becomes *b, a; b, r; b, a; b, a; b, a;* and we think we are going to have *b, a* continued; but no: here it becomes *b, s; b, s; b, a; b, s; b, s; c, s; b, s; b, s;* and we think we are surely going to have *b, s* continued, but behold it runs away to the end with a quick *b, b, a; b, b, b, b!** Very often, however, the designer is satisfied with *one* surprise, but I never saw a good illuminated border without one at least; and no series of any kind is ever introduced by a great composer in a painting without a snap somewhere. There is a pretty one in Turner's drawing of Rome, with the large balustrade for a foreground in the Hakewell's

* I am describing from a MS., *circa* 1300, of Gregory's "Decretalia" in my own possession.

Italy series : the single baluster struck out of the line, and showing the street below through the gap, simply makes the whole composition right, when otherwise, it would have been stiff and absurd.

If you look back to Fig. 48. you will see, in the arrangement of the battlements, a simple instance of the use of such variation. The whole top of the tower, though actually three sides of a square, strikes the eye as a continuous series of five masses. The first two, on the left, somewhat square and blank ; then the next two higher and richer, the tiles being seen on their slopes. Both these groups being couples, there is enough monotony in the series to make a change pleasant ; and the last battlement, therefore, is a little higher than the first two,—a little lower than the second two,—and different in shape from either. Hide it with your finger, and see how ugly and formal the other four battlements look.

There are in this figure several other simple illustrations of the laws we have been tracing. Thus the whole shape of the wall's mass being square, it is well, still for the sake of contrast, to oppose it not only by the element of curvature, in the ring, and lines of the roof below, but by that of sharpness ; hence the pleasure which the eye takes in the projecting point of the roof. Also because the walls are thick and sturdy, it is well to contrast their strength with weakness ; therefore we enjoy the evident decrepitude of this roof as it sinks between them. The whole mass being nearly white, we want a contrasting shadow somewhere ; and get it, under our piece of decrepitude. This shade, with the tiles of the wall below, forms another pointed mass, necessary to the first by the law of repetition. Hide this inferior angle with your finger, and see how ugly the other looks. A sense of the law of symmetry, though you might hardly suppose it, has some share in the feeling with which you look at the battlements ; there is a certain pleasure in the opposed slopes of their top, on one side down to the left, on the other to the right. Still less would you think the law of radiation had anything to do with the matter : but if you take the extreme point of the black shadow on the left for a centre and follow first the low curve

of the eaves of the wall, it will lead you, if you continue it, to the point of the tower cornice ; follow the second curve, the top of the tiles of the wall, and it will strike the top of the right-hand battlement ; then draw a curve from the highest point of the angle battlement on the left, through the points of the roof and its dark echo ; and you will see how the whole top of the tower radiates from this lowest dark point. There are other curvatures crossing these main ones, to keep them from being too conspicuous. Follow the curve of the upper roof, it will take you to the top of the highest battlement ; and the stones indicated at the right-hand side of the tower are more extended at the bottom, in order to get some less direct expression of sympathy, such as irregular stones may be capable of, with the general flow of the curves from left to right.

You may not readily believe, at first, that all these laws are indeed involved in so trifling a piece of composition. But as you study longer, you will discover that these laws, and many more, are obeyed by the powerful composers in every *touch* : that literally, there is never a dash of their pencil which is not carrying out appointed purposes of this kind in twenty various ways at once ; and that there is as much difference, in way of intention and authority, between one of the great composers ruling his colours, and a common painter confused by them, as there is between a general directing the march of an army, and an old lady carried off her feet by a mob.

7. THE LAW OF INTERCHANGE.

Closely connected with the law of contrast is a law which enforces the unity of opposite things, by giving to each a portion of the character of the other. If, for instance, you divide a shield into two masses of colour, all the way down—suppose blue and white, and put a bar, or figure of an animal, partly on one division, partly on the other, you will find it pleasant to the eye if you make the part of the animal blue which comes upon the white half, and white which comes upon the blue half. This is done in heraldry, partly for the sake of perfect intelligibility, but yet more for the sake of delight in interchange of colour, since, in all ornamentation

whatever, the practice is continual, in the ages of good design.

Sometimes this alternation is merely a reversal of contrasts ; as that, after red has been for some time on one side, and blue on the other, red shall pass to blue's side and blue to red's. This kind of alternation takes place simply in four-quartered shields ; in more subtle pieces of treatment, a little bit only of each colour is carried into the other, and they are as it were dovetailed together. One of the most curious facts which will impress itself upon you, when you have drawn some time carefully from Nature in light and shade, is the appearance of intentional artifice with which contrasts of this alternate kind are produced by her ; the artistry with which she will darken a tree trunk as long as it comes against light sky, and throw sunlight on it precisely at the spot where it comes against a dark hill, and similarly treat all her masses of shade and colour, is so great, that if you only follow her closely, every one who looks at your drawing with attention will think that you have been inventing the most artificially and unnaturally delightful interchanges of shadow that could possibly be devised by human wit.

You will find this law of interchange insisted upon at length by Prout in his "Lessons on Light and Shade : " it seems, of all his principles of composition, to be the one he is most conscious of ; many others he obeys by instinct, but this he formally accepts and forcibly declares.

The typical purpose of the law of interchange is, of course, to teach us how opposite natures may be helped and strengthened by receiving each, as far as they can, some impress or imparted power, from the other.

8. THE LAW OF CONSISTENCY.

It is to be remembered, in the next place, that while contrast exhibits the *characters* of things, it very often neutralises or paralyses their *power*. A number of white things may be shown to be clearly white by opposition of a black thing, but if you want the full power of their gathered light, the black thing may be seriously in our way. Thus, while contrast

displays things, it is unity and sympathy which employ them, concentrating the power of several into a mass. And, not in art merely, but in all the affairs of life, the wisdom of man is continually called upon to reconcile these opposite methods of exhibiting, or using, the materials in his power. By change he gives them pleasantness, and by consistency value; by change he is refreshed, and by perseverance strengthened.

Hence many compositions address themselves to the spectator by aggregate force of colour or line, more than by contrasts of either; many noble pictures are painted almost exclusively in various tones of red, or grey, or gold, so as to be instantly striking by their breadth of flush, or glow, or tender coldness, these qualities being exhibited only by slight and subtle use of contrast. Similarly as to form; some compositions associate massive and rugged forms, others slight and graceful ones, each with few interruptions by lines of contrary character. And, in general, such compositions possess higher sublimity than those which are more mingled in their elements. They tell a special tale, and summon a definite state of feeling, while the grand compositions merely please the eye.

This unity or breadth of character generally attaches most to the works of the greatest men; their separate pictures have all separate aims. We have not, in each, grey colour set against sombre, and sharp forms against soft, and loud passages against low; but we have the bright picture, with its delicate sadness; the sombre picture, with its single ray of relief; the stern picture, with only one tender group of lines; the soft and calm picture, with only one rock angle at its flank; and so on. Hence the variety of their work, as well as its impressiveness. The principal bearing of this law, however, is on the separate masses or divisions of a picture: the character of the whole composition may be broken or various, if we please, but there must certainly be a tendency to consistent assemblage in its divisions. As an army may act on several points at once, but can only act effectually by having somewhere formed and regular masses, and not wholly by skirmishers; so a picture may be various in its tendencies, but

must be somewhere united and coherent in its masses. Good composers are always associating their colours in great groups; binding their forms together by encompassing lines, and securing, by various dexterities of expedient, what they themselves call "breadth:" that is to say, a large gathering of each kind of thing into one place; light being gathered to light, darkness to darkness, and colour to colour. If, however, this be done by introducing false lights or false colours, it is absurd and monstrous; the skill of a painter consists in obtaining breadth by rational arrangement of his objects, not by forced or wanton treatment of them. It is an easy matter to paint one thing all white, and another all black or brown; but not an easy matter to assemble all the circumstances which will naturally produce white in one place, and brown in another. Generally speaking, however, breadth will result in sufficient degree from fidelity of study: Nature is always broad; and if you paint her colours in true relations, you will paint them in majestic masses. If you find your work look broken and scattered, it is, in all probability, not only ill composed, but untrue.

The opposite quality to breadth, that of division or scattering of light and colour, has a certain contrasting charm, and is occasionally introduced with exquisite effect by good composers.* Still, it is never the mere scattering, but the order discernible through this scattering, which is the real source of pleasure; not the mere multitude, but the constellation of multitude. The broken lights in the work of a good painter wander like flocks upon the hills, not unshepherded; speaking of life and peace: the broken lights of a bad painter fall like hailstones, and are capable only of mischief, leaving it to be wished they were also of dissolution.

* One of the most wonderful compositions of Tintoret in Venice, is little more than a field of subdued crimson, spotted with flakes of scattered gold. The upper clouds in the most beautiful skies owe great part of their power to infinitude of division; order being marked through this division.

9. THE LAW OF HARMONY.

This last law is not, strictly speaking, so much one of composition as of truth, but it must guide composition, and is properly, therefore, to be stated in this place.

Good drawing is, as we have seen, an *abstract* of natural facts ; you cannot represent all that you would, but must continually be falling short, whether you will or no, of the force, or quantity, of Nature. Now, suppose that your means and time do not admit of your giving the depth of colour in the scene, and that you are obliged to paint it paler. If you paint all the colours proportionately paler, as if an equal quantity of tint had been washed away from each of them, you still obtain a harmonious, though not an equally forcible statement of natural fact. But if you take away the colours unequally, and leave some tints nearly as deep as they are in Nature, while others are much subdued, you have no longer a true statement. You cannot say to the observer, "Fancy all those colours a little deeper, and you will have the actual fact." However he adds in imagination, or takes away, something is sure to be still wrong. The picture is out of harmony.

It will happen, however, much more frequently, that you have to darken the whole system of colours, than to make them paler. You remember, in your first studies of colour from Nature, you were to leave the passages of light which were too bright to be imitated, as white paper. But, in completing the picture, it becomes necessary to put colour into them ; and then the other colours must be made darker, in some fixed relation to them. If you deepen all proportionately, though the whole scene is darker than reality, it is only as if you were looking at the reality in a lower light : but if, while you darken some of the tints, you leave others undarkened, the picture is out of harmony, and will not give the impression of truth.

It is not, indeed, possible to deepen *all* the colours so much as to relieve the lights in their natural degree ; you would merely sink most of your colours, if you tried to do so, into a

broad mass of blackness: but it is quite possible to lower them harmoniously, and yet more in some parts of the picture than in others, so as to allow you to show the light you want in a visible relief. In well-harmonised pictures this is done by gradually deepening the tone of the picture towards the lighter parts of it, without materially lowering it in the very dark parts; the tendency in such pictures being, of course, to include large masses of middle tints. But the principal point to be observed in doing this, is to deepen the individual tints without dirtying or obscuring them. It is easy to lower the tone of the picture by washing it over with grey or brown; and easy to see the effect of the landscape, when its colours are thus universally polluted with black, by using the black convex mirror, one of the most pestilent inventions for falsifying nature and degrading art which ever was put into an artist's hand.* For the thing required is not to darken pale yellow by mixing grey with it, but to deepen the pure yellow; not to darken crimson by mixing black with it, but by making it deeper and richer crimson: and thus the required effect could only be seen in Nature, if you had pieces of glass of the colour of every object in your landscape, and of every minor hue that made up those colours, and then could see the real landscape through this deep gorgeousness of the varied glass. You cannot do this with glass, but you can do it for yourself as you work; that is to say, you can put deep blue for pale blue, deep gold for pale gold, and so on, in the proportion you need; and then you may paint as forcibly as you choose, but your work will still be in the manner of Titian, not of Caravaggio or Spagnoletto, or any other of the black slaves of painting.†

* I fully believe that the strange grey gloom, accompanied by considerable power of effect, which prevails in modern French art must be owing to the use of this mischievous instrument; the French landscape always gives me the idea of Nature seen carelessly in the dark mirror, and painted coarsely, but scientifically, through the veil of its perversion.

* Various other parts of this subject are entered into, especially in their bearing on the ideal of painting, in "*Modern Painters*," vol. iv. chap. iii.

Supposing those scales of colour, which I told you to prepare in order to show you the relations of colour to grey, were quite accurately made, and numerous enough, you would have nothing more to do, in order to obtain a deeper tone in any given mass of colour, than to substitute for each of its hues the hue as many degrees deeper in the scale as you wanted, that is to say, if you want to deepen the whole two degrees, substituting for the yellow No. 5. the yellow No. 7., and for the red No. 9. the red No. 11., and so on; but the hues of any object in Nature are far too numerous, and their degrees too subtle, to admit of so mechanical a process. Still, you may see the principle of the whole matter clearly by taking a group of colours out of your scale, arranging them prettily, and then washing them all over with grey: that represents the treatment of Nature by the black mirror. Then arrange the same group of colours, with the tints five or six degrees deeper in the scale; and that will represent the treatment of Nature by Titian.

You can only, however, feel your way fully to the right of the thing by working from Nature.

The best subject on which to begin a piece of study of this kind is a good thick tree trunk, seen against blue sky with some white clouds in it. Paint the clouds in true and tenderly gradated white; then give the sky a bold full blue, bringing them well out; then paint the trunk and leaves grandly dark against all, but in such glowing dark green and brown as you see they will bear. Afterwards proceed to more complicated studies, matching the colours carefully first by your old method; then deepening each colour with its own tint, and being careful, above all things, to keep truth of equal change when the colours are connected with each other, as in dark and light sides of the same object. Much more aspect and sense of harmony are gained by the precision with which you observe the relation of colours in dark sides and light sides, and the influence of modifying reflections, than by mere accuracy of added depth in independent colours.

This harmony of tone, as it is generally called, is the most important of those which the artist has to regard. But there

are all kinds of harmonies in a picture, according to its mode of production. There is even a harmony of *touch*. If you paint one part of it very rapidly and forcibly, and another part slowly and delicately, each division of the picture may be right separately, but they will not agree together: the whole will be effectless and valueless, out of harmony. Similarly, if you paint one part of it by a yellow light in a warm day, and another by a grey light in a cold day, though both may have been sunlight, and both may be well toned, and have their relative shadows truly cast, neither will look like light: they will destroy each other's power, by being out of harmony. These are only broad and definable instances of discordance; but there is an extent of harmony in all good work much too subtle for definition; depending on the draughtsman's carrying everything he draws up to just the balancing and harmonious point, in finish, and colour, and depth of tone, and intensity of moral feeling, and style of touch, all considered at once; and never allowing himself to lean too emphatically on detached parts, or exalt one thing at the expense of another, or feel acutely in one place and coldly in another. If you have got some of Cruikshank's etchings, you will be able, I think, to feel the nature of harmonious treatment in a simple kind, by comparing them with any of Richter's illustrations to the numerous German story-books lately published at Christmas, with all the German stories spoiled. Cruikshank's work is often incomplete in character and poor in incident, but, as drawing, it is *perfect* in harmony. The pure and simple effects of daylight which he gets by his thorough mastery of treatment in this respect, are quite unrivalled, as far as I know, by any other work executed with so few touches. His vignettes to Grimm's German stories, already recommended, are the most remarkable in this quality. Richter's illustrations, on the contrary, are of a very high stamp as respects understanding of human character, with infinite playfulness and tenderness of fancy; but, as drawings, they are almost unendurably out of harmony, violent blacks in one place being continually opposed to trenchant white in another; and, as is almost sure to be the case with bad harmonists, the local colour hardly felt anywhere. All German

work is apt to be out of harmony, in consequence of its too frequent conditions of affectation, and its wilful refusals of fact ; as well as by reason of a feverish kind of excitement, which dwells violently on particular points, and makes all the lines of thought in the picture to stand on end, as it were, like a cat's fur electrified ; while good work is always as quiet as a couchant leopard, and as strong.

I have now stated to you all the laws of composition which occur to me as capable of being illustrated or defined ; but there are multitudes of others which, in the present state of my knowledge, I cannot define, and others which I never hope to define ; and these the most important, and connected with the deepest powers of the art. Among those which I hope to be able to explain when I have thought of them more, are the laws which relate to nobleness and ignobleness ; that ignobleness especially which we commonly call "vulgarity," and which, in its essence, is one of the most curious subjects of inquiry connected with human feeling. Among those which I never hope to explain, are chiefly laws of expression, and others bearing simply on simple matters ; but, for that very reason, more influential than any others. These are, from the first, as inexplicable as our bodily sensations are ; it being just as impossible, I think, to explain why one succession of musical notes* shall be noble and pathetic, and such as might have been sung by Casella to Dante, and why another succession is base and ridiculous, and would be fit only for the reasonably good ear of Bottom, as to explain why we like sweetness, and dislike bitterness. The best part of every great work is always inexplicable : it is good because it is good ; and innocently gracious, opening as the green of the earth, or falling as the dew of heaven.

But though you cannot explain them, you may always render

* In all the best arrangements of colour, the delight occasioned by their mode of succession is entirely inexplicable, nor can it be reasoned about ; we like it just as we like an air in music, but cannot reason any refractory person into liking it, if they do not : and yet there is distinctly a right and a wrong in it, and a good taste and bad taste respecting it, as also in music.

yourself more and more sensitive to these higher qualities by the discipline which you generally give to your character, and this especially with regard to the choice of incidents ; a kind of composition in some sort easier than the artistical arrangements of lines and colours, but in every sort nobler, because addressed to deeper feelings.

For instance, in the "*Datur Hora Quietis*," the last vignette to Roger's Poems, the plough in the foreground has three purposes. The first purpose is to meet the stream of sunlight on the river, and make it brighter by opposition ; but any dark object whatever would have done this. Its second purpose is by its two arms, to repeat the cadence of the group of the two ships, and thus give a greater expression of repose ; but two sitting figures would have done this. Its third and chief, or pathetic, purpose is, as it lies abandoned in the furrow (the vessels also being moored, and having their sails down), to be a type of human labour closed with the close of day. The parts of it on which the hand leans are brought most clearly into sight ; and they are the chief dark of the picture, because the tillage of the ground is required of man as a punishment ; but they make the soft light of the setting sun brighter, because rest is sweetest after toil. These thoughts may never occur to us as we glance carelessly at the design ; and yet their under current assuredly affects the feelings, and increases, as the painter meant it should, the impression of melancholy, and of peace.

Again, in the "*Lancaster Sands*," which is one of the plates I have marked as most desirable for your possession ; the stream of light which falls from the setting sun on the advancing tide stands similarly in need of some force of near object to relieve its brightness. But the incident which Turner has here adopted is the swoop of an angry seagull at a dog, who yelps at it, drawing back as the wave rises over his feet, and the bird shrieks within a foot of his face. Its unexpected boldness is a type of the anger of its ocean element, and warns us of the sea's advance just as surely as the abandoned plough told us of the ceased labour of the day.

It is not, however, so much in the selection of single in-

cidents of this kind as in the feeling which regulates the arrangement of the whole subject that the mind of a great composer is known. A single incident may be suggested by a felicitous chance, as a pretty motto might be for the heading of a chapter. But the great composers so arrange *all* their designs that one incident illustrates another, just as one colour relieves another. Perhaps the "Heysham," of the Yorkshire series which, as to its locality, may be considered a companion to the last drawing we have spoken of, the "Lancaster Sands," presents as interesting an example as we could find of Turner's feeling in this respect. The subject is a simple north-country village, on the shore of Morecambe Bay; not in the common sense, a picturesque village: there are no pretty bow-windows, or red roofs, or rocky steps of entrance to the rustic doors, or quaint gables; nothing but a single street of thatched and chiefly clay-built cottages, ranged in a somewhat monotonous line, the roofs so green with moss that at first we hardly discern the houses from the fields and trees. The village street is closed at the end by a wooden gate, indicating the little traffic there is on the road through it, and giving it something the look of a large farmstead, in which a right of way lies through the yard. The road which leads to this gate is full of ruts, and winds down a bad bit of hill between two broken banks of moor ground, succeeding immediately to the few enclosures which surround the village; they can hardly be called gardens; but a decayed fragment or two of fencing fill the gaps in the bank; and a clothes-line, with some clothes on it, striped blue and red, and a smock-frock, is stretched between the trunks of some stunted willows; a *very* small haystack and pigstye being seen at the back of the cottage beyond. An empty, two-wheeled, lumbering cart, drawn by a pair of horses with huge wooden collars, the driver sitting lazily in the sun, sideways on the leader, is going slowly home along the rough road, it being about country dinner-time. At the end of the village there is a better house, with three chimneys and a dormer window in its roof, and the roof is of stone shingle instead of thatch, but very rough. This house is no doubt the clergyman's; there is some smoke from one

of its chimneys, none from any other in the village ; this smoke is from the lowest chimney at the back, evidently that of the kitchen, and it is rather thick, the fire not having been long lighted. A few hundred yards from the clergyman's house, nearer the shore, is the church, discernible from the cottage only by its low-arched belfry, a little neater than one would expect in such a village ; perhaps lately built by the Puseyite incumbent ;* and beyond the church, close to the sea, are two fragments of a border war-tower, standing on their circular mound, worn on its brow deep into edges and furrows by the feet of the village children. On the bank of moor, which forms the foreground, are a few cows, the carter's dog barking at a vixenish one : the milkmaid is feeding another, a gentle white one, which turns its head to her, expectant of a handful of fresh hay, which she has brought for it in her blue apron, fastened up round her waist ; she stands with her pail on her head, evidently the village coquette, for she has a neat bodice, and pretty striped petticoat under the blue apron, and red stockings. Nearer us, the cowherd, barefooted, stands on a piece of the limestone rock (for the ground is thistly and not pleasurable to bare feet) ;—whether boy or girl we are not sure ; it may be a boy, with a girl's worn-out bonnet on, or a girl with a pair of ragged trowsers on ; probably the first, as the old bonnet is evidently useful to keep the sun out of our eyes when we are looking for strayed cows among the moorland hollows, and helps us at present to watch (holding the bonnet's edge down) the quarrel of the vixenish cow with the dog, which, leaning on our long stick, we allow to proceed without any interference. A little to the right the hay is being got in, of which the milkmaid has just taken her apronful to the white cow ; but the hay is very thin, and cannot well be raked up because of the rocks ; we must glean it

* “ Puseyism ” was unknown in the days when this drawing was made ; but the kindly and helpful influences of what may be call ecclesiastical sentiment, which, in a morbidly exaggerated condition, forms one of the principal elements of “ Puseyism,”—I use this word regretfully, no other existing which will serve for it,—had been known and felt in our wild northern districts long before.

like corn, hence the smallness of our stack behind the willows ; and a woman is pressing a bundle of it hard together, kneeling against the rock's edge, to carry it safely to the hay-cart without dropping any. Beyond the village is a rocky hill, deep set with brushwood, a square crag or two of limestone emerging here and there, with pleasant turf on their brows, heaved in russet and mossy mounds against the sky, which, clear and calm, and as golden as the moss, stretches down behind it towards the sea. A single cottage just shows its roof over the edge of the hill, looking seaward ; perhaps one of the village shepherds is a sea captain now, and may have built it there, that his mother may first see the sails of his ship whenever it runs into the bay. Then under the hill, and beyond the border tower, is the blue sea itself, the waves flowing in over the sand in long curved lines, slowly ; shadows of cloud and gleams of shallow water on white sand alternating—miles away ; but no sail is visible, not one fisherboat on the beach, not one dark speck on the quiet horizon. Beyond all are the Cumberland mountains, clear in the sun, with rosy light on all their crags.

I should think the reader cannot but feel the kind of harmony there is in this composition ; the entire purpose of the painter to give us the impression of wild, yet gentle, country life, monotonous as the succession of the noiseless waves, patient and enduring as the rocks ; but peaceful, and full of health and quiet hope, and sanctified by the pure mountain air and baptismal dew of heaven, falling softly between days of toil and nights of innocence.

All noble composition of this kind can be reached only by instinct : you cannot set yourself to arrange such a subject ; you may see it, and seize it, at all times, but never laboriously invent it. And your power of discerning what is best in expression, among natural subjects, depends wholly on the temper in which you keep your own mind ; above all, on your living so much alone as to allow it to become acutely sensitive in its own stillness. The noisy life of modern days is wholly incompatible with any true perception of natural beauty. If you go down into Cumberland by the railroad, live in some

frequented hotel, and explore the hills with merry companions, however much you may enjoy your tour or their conversation, depend upon it you will never choose so much as one pictorial subject rightly ; you will not see into the depth of any. But take knapsack and stick, walk towards the hills by short day's journeys—ten or twelve miles a day—taking a week from some starting-place sixty or seventy miles away : sleep at the pretty little wayside inns, or the rough village ones ; then take the hills as they tempt you, following glen or shore as your eye glances or your heart guides, wholly scornful of local fame or fashion, and of everything which it is the ordinary traveller's duty to see or pride to do. Never force yourself to admire anything when you are not in the humour ; but never force yourself away from what you feel to be lovely, in search of anything better : and gradually the deeper scenes of the natural world will unfold themselves to you in still increasing fulness of passionate power ; and your difficulty will be no more to seek or to compose subjects, but only to choose one from among the multitude of melodious thoughts with which you will be haunted, thoughts which will of course be noble or original in proportion to your own depth of character and general power of mind : for it is not so much by the consideration you give to any single drawing, as by the previous discipline of your powers of thought, that the character of your composition will be determined. Simplicity of life will make you sensitive to the refinement and modesty of scenery, just as inordinate excitement and pomp of daily life will make you enjoy coarse colours and affected forms. Habits of patient comparison and accurate judgment will make your art precious, as they will make your actions wise ; and every increase of noble enthusiasm in your living spirit will be measured by the reflection of its light upon the works of your hands.

Faithfully yours,

J. RUSKIN.

APPENDIX.

THINGS TO BE STUDIED.

THE worst danger by far, to which a solitary student is exposed, is that of liking things that he should not. It is not so much his difficulties, as his tastes, which he must set himself to conquer ; and although, under the guidance of a master, many works of art may be made instructive, which are only of partial excellence (the good and bad of them being duly distinguished), his safeguard, as long as he studies alone, will be in allowing himself to possess only things, in their way, so free from faults, that nothing he copies in them can seriously mislead him, and to contemplate only those works of art which he knows to be either perfect or noble in their errors. I will therefore set down in clear order, the names of the masters whom you may safely admire, and a few of the books which you may safely possess. In these days of cheap illustration, the danger is always rather of your possessing too much than too little. It may admit of some question, how far the looking at bad art may set off and illustrate the characters of the good ; but, on the whole, I believe it is best to live always on quite wholesome food, and that our taste of it will not be made more acute by feeding, however temporarily, on ashes. Of course the works of the great masters can only be serviceable to the student after he has made considerable progress himself. It only wastes the time and dulls the feelings of young persons, to drag them through picture galleries ; at least, unless they themselves wish to look at particular pictures. Generally, young people only care to enter a picture gallery when there is a chance of getting leave to run a race to the other end of

it ; and they had better do that in the garden below. If, however, they have any real enjoyment of pictures, and want to look at this one or that, the principal point is never to disturb them in looking at what interests them, and never to make them look at what does not. Nothing is of the least use to young people (nor, by the way, of much use to old ones), but what interests them ; and therefore, though it is of great importance to put nothing but good art into their possession, yet when they are passing through great houses or galleries, they should be allowed to look precisely at what pleases them : if it is not useful to them as art, it will be in some other way : and the healthiest way in which art can interest them is when they look at it, not as art, but because it represents something they like in nature. If a boy has had his heart filled by the life of some great man, and goes up thirstily to a Vandyck portrait of him, to see what he was like, that is the wholesomest way in which he can begin the study of portraiture ; if he love mountains, and dwell on a Turner drawing because he sees in it a likeness to a Yorkshire scar, or an Alpine pass, that is the wholesomest way in which he can begin the study of landscape ; and if a girl's mind is filled with dreams of angels and saints, and she pauses before an Angelico because she thinks it must surely be indeed like heaven, that is the wholesomest way for her to begin the study of religious art.

When, however, the student has made some definite progress, and every picture becomes really a guide to him, false or true, in his own work, it is of great importance that he should never so much as look at bad art ; and then, if the reader is willing to trust me in the matter, the following advice will be useful to him. In which, with his permission, I will quit the indirect and return to the epistolary address, as being the more convenient.

First, in Galleries of Pictures :

1. You may look, with trust in their being always right, at Titian, Veronese, Tintoret, Giorgione, John Bellini, and Velasquez ; the authenticity of the picture being of course established for you by proper authority.

2. You may look with admiration, admitting, however,

question of right and wrong,* at Van Eyck, Holbein, Perugino, Francia, Angelico, Leonardo da Vinci, Correggio, Vandyck, Rembrandt, Reynolds, Gainsborough, Turner, and the modern Pre-Raphaelites.† You had better look at no other painters than these, for you run a chance, otherwise, of being led far off the road, or into grievous faults, by some of the other great ones, as Michael Angelo, Raphael, and Rubens; and of being, besides, corrupted in taste by the base ones, as Murillo, Salvator, Claude, Gasper Poussin, Teniers, and such others. You may look, however, for examples of evil, with safe universality of reprobation, being sure that everything you see is bad, at Domenichino, the Caracci, Bronzino, and the figure pieces of Salvator.

Among those named for study under question, you cannot look too much at, nor grow too enthusiastically fond of, Angelico, Correggio, Reynolds, Turner, and the Pre-Raphaelites; but, if you find yourself getting especially fond of any of the others, leave off looking at them, for you must be going wrong some way or other. If, for instance, you begin to like Rembrandt or Leonardo especially, you are losing your feeling for colour; if you like Van Eyck or Perugino especially, you must be getting too fond of rigid detail; and if you like Vandyck or Gainsborough especially, you must be too much attracted by gentlemanly flimsiness.

Secondly, of published, or otherwise multiplied, art, such as you may be able to get yourself, or to see at private houses or in shops, the works of the following masters are the most desirable, after the Turners, Rembrandts, and Durers, which I have asked you to get first:

1. Samuel Prout.

All his published lithographic sketches are of the greatest

* I do not mean necessarily to imply inferiority of rank, in saying that this second class of painters have questionable qualities. The greatest men have often many faults and sometimes their faults are a part of their greatness; but such men are not, of course, to be looked upon by the student with absolute implicitness of faith.

† Including under this term, John Lewis, and William Hunt of the Old Water colour, who, take him all in all, is the best painter of still life, I believe, that ever existed.

value, wholly unrivalled in power of composition, and in love and feeling of architectural subject. His somewhat mannered linear execution, though not to be imitated in your own sketches from Nature, may be occasionally copied, for discipline's sake, with great advantage ; it will give you a peculiar steadiness of hand, not quickly attainable in any other way ; and there is no fear of your getting into any faultful mannerism as long as you carry out the different modes of more delicate study above recommended.

If you are interested in architecture, and wish to make it your chief study, you should draw much from photographs of it ; and then from the architecture itself, with the same completion of detail and gradation, only keeping the shadows of due paleness, in photographs they are always about four times as dark as they ought to be ; and treat buildings with as much care and love as artists do their rock foregrounds, drawing all the moss and weeds, and stains upon them. But if, without caring to understand architecture, you merely want the picturesque character of it, and to be able to sketch it fast, you cannot do better than take Prout for your *exclusive* master ; only do not think that you are copying Prout by drawing straight lines with dots at the end of them. Get first his "Rhine," and draw the subjects that have most hills, and least architecture in them, with chalk on smooth paper, till you can lay on his broad flat tints, and get his gradations of light, which are very wonderful ; then take up the architectural subjects in the "Rhine," and draw again and again the groups of figures, &c., in his "Microcosm," and "Lessons on Light and Shadow." After that, proceed to copy the grand subjects in the sketches in "Flanders and Germany ;" or in "Switzerland and Italy," if you cannot get the Flanders ; but the Switzerland is very far inferior. Then work from Nature, not trying to Proutise Nature, by breaking smooth buildings into rough ones, but only drawing *what you see*, with Prout's simple method and firm lines. Don't copy his coloured works. They are good, but not at all equal to his chalk and pencil drawings, and you will become a mere imitator, and a very feeble imitator, if you use colour at all in

Prout's method. I have not space to explain why this is so, it would take a long piece of reasoning; trust me for the statement.

2. John Lewis.

His sketches in Spain, lithographed by himself, are very valuable. Get them, if you can, and also some engravings (about eight or ten, I think, altogether) of wild beasts, executed by his own hand a long time ago; they are very precious in every way. The series of the "Alhambra" is rather slight, and few of the subjects are lithographed by himself; still it is well worth having.

But let no lithographic work come into the house, if you can help it, nor even look at any, except Prout's, and those sketches of Lewis's.

3. George Cruikshank.

If you ever happen to meet with the two volumes of "Grimm's German Stories," which were illustrated by him long ago, pounce upon them instantly; the etchings in them are the finest things, next to Rembrandt's, that, as far as I know, have been done since etching was invented. You cannot look at them too much, nor copy them too often.

All his works are very valuable, though disagreeable when they touch on the worst vulgarities of modern life; and often much spoiled by a curiously mistaken type of face, divided so as to give too much to the mouth and eyes, and leave too little for forehead, the eyes being set about two thirds up, instead of at half the height of the head. But his manner of work is always right; and his tragic power, though rarely developed, and warped by habits of caricature, is, in reality, as great as his grotesque power.

There is no fear of his hurting your taste, as long as your principal work lies among art of so totally different a character as most of that which I have recommended to you; and you may, therefore, get great good by copying almost anything of his that may come in your way; except only his illustrations lately published to "Cinderella," and "Jack and the

Beanstalk," and "Tom Thumb," which are much over-laboured, and confused in line. You should get them, but do not copy them.

4. Alfred Rethel.

I only know two publications by him ; one, the "Dance of Death," with text by Reinick, published in Leipsic, but to be had now of any London bookseller for the sum, I believe, of eighteen pence, and containing six plates full of instructive character ; the other, of two plates only, "Death the Avenger," and "Death the Friend." These two are far superior to the "Todtentanz," and, if you can get them, will be enough in themselves, to show all that Rethel can teach you. If you dislike ghastly subjects, get "Death the Friend" only.

5. Bewick.

The execution of the plumage in Bewick's birds is the most masterly thing ever yet done in wood-cutting ; it is just worked as Paul Veronese would have worked in wood, had he taken to it. His vignettes, though too coarse in execution, and vulgar in types of form, to be good copies, show, nevertheless, intellectual power of the highest order ; and there are pieces of sentiment in them, either pathetic or satirical, which have never since been equalled in illustrations of this simple kind ; the bitter intensity of the feeling being just like that which characterises some of the leading Pre-Raphaelites. Bewick is the Burns of painting.

6. Blake.

The "Book of Job," engraved by himself, is of the highest rank in certain characters of imagination and expression ; in the mode of obtaining certain effects of light it will also be a very useful example to you. In expressing conditions of glaring and flickering light, Blake is greater than Rembrandt.

7. Richter.

I have already told you what to guard against in looking at his works. I am a little doubtful whether I have done well in including them in this catalogue at all ; but the fancies in them are so pretty and numberless, that I must risk, for their sake,

the chance of hurting you a little in judgment of style. If you want to make presents of story-books to children, his are the best you can now get.

8. Rossetti.

An edition of Tennyson, lately published, contains wood-cuts from drawings by Rossetti and other chief Pre-Raphaelite masters. They are terribly spoiled in the cutting, and generally the best part, the expression of feature, *entirely* lost ;* still they are full of instruction, and cannot be studied too closely. But observe, respecting these wood-cuts, that if you have been in the habit of looking at much spurious work, in which sentiment, action, and style are borrowed or artificial, you will assuredly be offended at first by all genuine work, which is intense in feeling. Genuine art, which is merely art, such as Veronese's or Titian's, may not offend you, though the chances are that you will not care about it : but genuine works of feeling, such as Maude and Aurora Leigh in poetry, or the grand Pre-Raphaelite designs in painting, are sure to offend you ; and if you cease to work hard, and persist in looking at vicious and false art, they will continue to offend you. It will be well, therefore, to have one type of entirely false art, in order to know what to guard against. Flaxman's outlines to Dante contain, I think, examples of almost every kind of falsehood and feebleness which it is possible for a trained artist, not base in thought, to commit or admit, both in design and execution. Base or degraded choice of subject, such as you will constantly find in Teniers and others of the Dutch painters, I need not, I hope, warn you against ; you will simply turn away from it in disgust ; while mere bad or feeble drawing, which makes mistakes in every direction at once, cannot teach you the particular sort of educated fallacy

* This is especially the case in the St. Cecily, Rossetti's first illustration to the "palace of art," which would have been the best in the book had it been well engraved. The whole work should be taken up again, and done by line engraving, perfectly ; and wholly from Pre-Raphaelite designs, with which no other modern work can bear the least comparison.

in question. But, in these designs of Flaxman's, you have gentlemanly feeling, and fair knowledge of anatomy, and firm setting down of lines, all applied in the foolishhest and worst possible way; you cannot have a more finished example of learned error, amiable want of meaning, and bad drawing with a steady hand.* Retsch's outlines have more real material in them than Flaxman's, occasionally showing true fancy and power; in artistic principle they are nearly as bad, and in taste worse. All outlines from statuary, as given in works on classical art, will be very hurtful to you if you in the least like them; and *nearly* all finished line engravings. Some particular prints I could name which possess instructive qualities, but it would take too long to distinguish them, and the best way is to avoid line engravings of figures altogether. If you happen to be a rich person, possessing quantities of them, and if you are fond of the large finished prints from Raphael, Correggio, &c., it is wholly impossible that you can make any

* The praise I have given incidentally to Flaxman's sculpture in the "Seven Lamps," and elsewhere, refers wholly to his studies from Nature, and simple groups in marble, which were always good and interesting. Still, I have overrated him, even in this respect; and it is generally to be remembered that, in speaking of artists whose works I cannot be supposed to have specially studied, the errors I fall into will always be on the side of praise. For, of course, praise is most likely to be given when the thing praised is above one's knowledge; and, therefore, as our knowledge increases, such things may be found less praiseworthy than we thought. But blame can only be justly given when the thing blamed is below one's level of sight; and, practically, I never do blame anything until I have got well past it, and am certain that there is demonstrable falsehood in it. I believe, therefore, all my blame to be wholly trustworthy, having never yet had occasion to repent of one depreciatory word that I have ever written, while I have often found that, with respect to things I had not time to study closely, I was led too far by sudden admiration, helped, perhaps, by peculiar associations, or other deceptive accidents; and this the more, because I never care to check an expression of delight, thinking the chances are, that even if mistaken, it will do more good than harm: but I weigh every word of blame with scrupulous caution. I have sometimes erased a strong passage of blame from second editions of my books; but this was only when I found it offended the reader without convincing him, never because I repented of it myself.

progress in knowledge of real art till you have sold them all—or burnt them, which would be a greater benefit to the world. I hope that some day, true and noble engravings will be made from the few pictures of the great schools, which the restorations undertaken by the modern managers of foreign galleries may leave us; but the existing engravings have nothing whatever in common with the good in the works they profess to represent, and if you like them, you like in the originals of them hardly anything but their errors.

Finally, your judgment will be, of course, much affected by your taste in literature. Indeed, I know many persons who have the purest taste in literature, and yet false taste in art, and it is a phenomenon which puzzles me not a little: but I have never known any one with false taste in books, and true taste in pictures. It is also of the greatest importance to you, not only for art's sake, but for all kinds of sake, in these days of book deluge, to keep out of the salt swamps of literature, and live on a rocky island of your own, with a spring and a lake in it, pure and good. I cannot, of course, suggest the choice of your library to you, every several mind needs different books; but there are some books which we all need, and assuredly, if you read Homer,* Plato, Æschylus, Herodotus, Dante,† Shakspeare, and Spenser, as much as you ought, you will not require wide enlargement of shelves to right and left of them for purposes of perpetual study. Among modern books, avoid generally magazine and review literature. Sometimes it may contain a useful abridgement or a wholesome piece of criticism; but the chances are ten to one it will either waste your time or mislead you. If you want to understand any subject whatever, read the best book upon it you can hear of; not a review of the book. If you don't like the first book you

* Chapman's, if not the original.

† Carey's or Cayley's, if not the original. I do not know which are the best translations of Plato. Herodotus and Æschylus can only be read in the original. It may seem strange that I name books like these for "beginners:" but all the greatest books contain food for all ages; and an intelligent and rightly bred youth or girl ought to enjoy much, even in Plato, by the time they are fifteen or sixteen.

try, seek for another ; but do not hope ever to understand the subject without pains, by a reviewer's help. Avoid especially that class of literature which has a knowing tone ; it is the most poisonous of all. Every good book, or piece of book, is full of admiration and awe ; it may contain firm assertion or stern satire, but it never sneers coldly, nor asserts haughtily, and it always leads you to reverence or love something with your whole heart. It is not always easy to distinguish the satire of the venomous race of books from the satire of the noble and pure ones ; but in general you may notice that the cold-blooded Crustacean and Batrachian books will sneer at sentiment ; and the warm-blooded, human books, at sin. Then, in general, the more you can restrain your serious reading to reflective or lyric poetry, history, and natural history, avoiding fiction and the drama, the healthier your mind will become. Of modern poetry keep to Scott, Wordsworth, Keats, Crabbe, Tennyson, the two Brownings, Lowell, Longfellow, and Coventry Patmore, whose "Angel in the House" is a most finished piece of writing, and the sweetest analysis we possess of quiet modern domestic feeling ; while Mrs. Browning's "Aurora Leigh" is, as far as I know, the greatest poem which the century has produced in any language. Cast Coleridge at once aside, as sickly and useless ; and Shelley as shallow and verbose ; Byron, until your taste is fully formed, and you are able to discern the magnificence in him from the wrong. Never read bad or common poetry, nor write any poetry yourself ; there is, perhaps, rather too much than too little in the world already.

Of reflective prose, read chiefly Bacon, Johnson, and Helps. Carlyle is hardly to be named as a writer for "beginners," because his teaching, though to some of us vitally necessary, may to others be hurtful. If you understand and like him, read him ; if he offends you, you are not yet ready for him, and perhaps may never be so ; at all events, give him up, as you would sea-bathing if you found it hurt you, till you are stronger. Of fiction, read Sir Charles Grandison, Scott's novels, Miss Edgeworth's, and, if you are a young lady, Madame de Genlis', the French Miss Edgeworth ; making

these, I mean, your constant companions. Of course you must, or will read other books for amusement, once or twice ; but you will find that these have an element of perpetuity in them, existing in nothing else of their kind : while their peculiar quietness and repose of manner will also be of the greatest value in teaching you to feel the same characters in art. Read little at a time, trying to feel interest in little things, and reading not so much for the sake of the story as to get acquainted with the pleasant people into whose company these writers bring you. A common book will often give you much amusement, but it is only a noble book which will give you dear friends. Remember also that it is of less importance to you in your earlier years, that the books you read should be clever, than that they should be right. I do not mean oppressively or repulsively instructive ; but that the thoughts they express should be just, and the feelings they excite generous. It is not necessary for you to read the wittiest or the most suggestive books : it is better, in general, to hear what is already known, and may be simply said. Much of the literature of the present day, though good to be read by persons of ripe age, has a tendency to agitate rather than confirm, and leaves its readers too frequently in a helpless or hopeless indignation, the worst possible state into which the mind of youth can be thrown. It may, indeed, become necessary for you, as you advance in life, to set your hand to things that need to be altered in the world, or apply your heart chiefly to what must be pitied in it, or condemned ; but, for a young person, the safest temper is one of reverence, and the safest place one of obscurity. Certainly at present, and perhaps through all your life, your teachers are wisest when they make you content in quiet virtue, and that literature and art are best for you which point out, in common life and familiar things, the objects for hopeful labour, and for humble love.



BLOSSOMING—AND STRICKEN IN DAYS.

Common Heath. (Ling.)

PROSERPINA

STUDIES OF WAYSIDE FLOWERS

*WHILE THE AIR WAS YET PURE AMONG THE ALPS
AND IN THE SCOTLAND AND ENGLAND
WHICH MY FATHER KNEW*

BY

JOHN RUSKIN, LL.D.

HONORARY STUDENT OF CHRISTCHURCH, AND SLADE PROFESSOR OF FINE ART

"Oh—Proserpina !

For the flowers now, which frighted, thou let'st fall
From Dis's waggon "

VOL. I

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INTRODUCTION.

BRANTWOOD, 14th March, 1874.

YESTERDAY evening I was looking over the first book in which I studied Botany,—Curtis's Magazine, published in 1795 at No. 3, St. George's Crescent, Blackfriars Road, and sold by the principal booksellers in Great Britain and Ireland. Its plates are excellent, so that I am always glad to find in it the picture of a flower I know. And I came yesterday upon what I suppose to be a variety of a favourite flower of mine, called, in Curtis, "the St. Bruno's Lily."

I am obliged to say "what I suppose to be a variety," because my pet lily is branched,* while this is drawn as unbranched, and especially stated to be so. And the page of text, in which this statement is made, is so characteristic of botanical books, and botanical science, not to say all science as hitherto taught for the blessing of mankind; and of the difficulties thereby accompanying its communication, that I extract the page entire, printing it, on page 7, as nearly as possible in facsimile.

Now you observe, in this instructive page, that you have in the first place, nine names given you for one flower; and that among these nine names, you are not even at liberty to make your choice, because the united authority of Haller and Miller may be considered as an accurate balance to the single authority of Linnæus; and you ought therefore for the present to remain, yourself, balanced between the sides. You may be farther embarrassed by finding that the *Anthericum* of Savoy

* At least, it throws off its flowers on each side in a bewilderingly pretty way; a real lily can't branch, I believe: but, if not, what is the use of the botanical books saying "on an unbranched stem"?

is only described as growing in Switzerland. And farther still, by finding that Mr. Miller describes two varieties of it, which differ only in size, while you are left to conjecture whether the one here figured is the larger or smaller ; and how great the difference is.

Farther, If you wish to know anything of the habits of the plant, as well as its nine names, you are informed that it grows both at the bottoms of the mountains, and the tops ; and that, with us, it flowers in May and June,—but you are not told when, in its native country.

The four lines of the last clause but one, may indeed be useful to gardeners ; but—although I know my good father and mother did the best they could for me in buying this beautiful book ; and though the admirable plates of it did their work, and taught me much, I cannot wonder that neither my infantine nor boyish mind was irresistibly attracted by the text of which this page is one of the most favourable specimens ; nor, in consequence, that my botanical studies were—when I had attained the age of fifty—no farther advanced than the reader will find them in the opening chapter of this book.

Which said book was therefore undertaken, to put, if it might be, some elements of the science of botany into a form more tenable by ordinary human and childish faculties ; or—for I can scarcely say I have yet any tenure of it myself—to make the paths of approach to it more pleasant. In fact, I only know, of it, the pleasant distant effects which it bears to simple eyes ; and some pretty mists and mysteries, which I invite my young readers to pierce, as they may, for themselves,—my power of guiding them being only for a little way.

Pretty mysteries, I say, as opposed to the vulgar and ugly mysteries of the so-called science of botany,—exemplified sufficiently in this chosen page. Respecting which, please observe farther ;—Nobody—I can say this very boldly—loves Latin more dearly than I ; but, precisely because I do love it (as well as for other reasons), I have always insisted that books, whether scientific or not, ought to be written either in Latin, or English ; and not in a doggish mixture of the refuse of both.

ANTHERICUM LILIASTRUM. SAVOY ANTHEERICUM, or
ST BRUNO'S LILY.



Class and Order.

HEXANDRIA MONOGYNIA.

Generic Character.

Cor. 6-petala, patens. *Caps.* ovata.

Specific Character and Synonyms.

ANTHERICUM *Liliastrum* foliis planis, scapo simplicissimo,
corollis campanulatis, staminibus declinatis.
Linn. Syst. Vegetab. ed. 14. Murr. p. 330.
Ait. Kew. v. I. p. 449.

HEMEROCALLIS floribus patulis secundis. *Hall. Hist.*
n. 1230.

PHALANGIUM magno flore. *Bauh. Pin. 29.*

PHALANGIUM *Allobrogicum* majus. *Clus. cur. app. alt.*

PHALANGIUM *Allobrogicum*. The Savoye Spider-wort. *Park.*
Parad. p. 150. tab. 151. f. 1.

Botanists are divided in their opinions respecting the genus of this plant; LINNÆUS considers it as an *Anthericum*, HALLER and MILLER make it an *Hemerocallis*.

It is a native of Switzerland, where, HALLER informs us, it grows abundantly in the Alpine meadows, and even on the summits of the mountains; with us it flowers in May and June.

It is a plant of great elegance, producing on an unbranched stem about a foot and a half high, numerous flowers of a delicate white colour, much smaller but resembling in form those of the common white lily, possessing a considerable degree of fragrance, their beauty is heightened by the rich orange colour of their antheræ; unfortunately they are but of short duration.

MILLER describes two varieties of it differing merely in size.

A loamy soil, a situation moderately moist, with an eastern or western exposure, suits this plant best; so situated, it will increase by its roots, though not very fast, and by parting of these in the autumn, it is usually propagated.

PARKINSON describes and figures it in his *Parad. Terrest.*, observing that "divers allured by the beauty of its flowers, had brought it into these parts."

Linnæus wrote a noble book of universal Natural History in Latin. It is one of the permanent classical treasures of the world. And if any scientific man thinks his labours are worth the world's attention, let him, also, write what he has to say in Latin, finishedly and exquisitely, if it take him a month to a page.*

But if—which, unless he be one chosen of millions, is assuredly the fact—his lucubrations are only of local and temporary consequence, let him write, as clearly as he can, in his native language.

This book, accordingly, I have written in English; (not, by the way, that I *could* have written it in anything else—so there are small thanks to me); and one of its purposes is to interpret, for young English readers, the necessary European Latin or Greek names of flowers, and to make them vivid and vital to their understandings. But two great difficulties occur in doing this. The first, that there are generally from three or four, up to two dozen, Latin names current for every flower; and every new botanist thinks his eminence only to be properly asserted by adding another.

The second, and a much more serious one, is of the Devil's own contriving—(and remember I am always quite serious when I speak of the Devil,)—namely, that the most current and authoritative names are apt to be founded on some unclean or debasing association, so that to interpret them is to defile the reader's mind. I will give no instance; too many will at once occur to any learned reader, and the unlearned I need not vex with so much as one: but, in such cases, since I could only take refuge in the untranslated word by leaving other Greek or Latin words also untranslated, and the nomenclature still entirely senseless,—and I do not choose to do this,—there is only one other course open to me, namely, to substitute boldly, to my own pupils, other generic names for the plants thus faultfully hitherto titled.

As I do not do this for my own pride, but honestly for my

* I have by happy chance just added to my Oxford library the poet Gray's copy of Linnæus, with its exquisitely written Latin notes, exemplary alike to scholar and naturalist.

reader's service, I neither question nor care how far the emendations I propose may be now or hereafter adopted. I shall not even name the cases in which they have been made for the serious reason above specified; but even shall mask those which there was real occasion to alter, by sometimes giving new names in cases where there was no necessity of such kind. Doubtless I shall be accused of doing myself what I violently blame in others. I do so; but with a different motive—of which let the reader judge as he is disposed. The practical result will be that the children who learn botany on the system adopted in this book will know the useful and beautiful names of plants hitherto given, in all languages; the useless and ugly ones they will not know. And they will have to learn one Latin name for each plant, which, when differing from the common one, I trust may yet by some scientific persons be accepted, and with ultimate advantage.

The learning of the one Latin name—as, for instance, *Gramen striatum*—I hope will be accurately enforced always;—but not less carefully the learning of the pretty English one—“Ladielace Grass”—with due observance that “Ladies’ laces hath leaves like unto Millet in fashion with many white vaines or ribs, and silver strakes running along through the midst of the leaves, fashioning the same like to laces of white and green silk, very beautiful and faire to behold.”

I have said elsewhere, and can scarcely repeat too often, that a day will come when men of science will think their names disgraced, instead of honoured, by being used to barbarise nomenclature; I hope therefore that my own name may be kept well out of the way; but, having been privileged to found the School of Art in the University of Oxford, I think that I am justified in requesting any scientific writers who may look kindly upon this book, to add such of the names suggested in it as they think deserving of acceptance, to their own lists of synonyms, under the head of “Schol. Art. Oxon.”

The difficulties thrown in the way of any quiet private student by existing nomenclature may be best illustrated by my simply stating what happens to myself in endeavouring

to use the page above facsimile'd. Not knowing how far St. Bruno's Lily might be connected with my own pet one, and not having any sufficient book on Swiss botany, I take down Loudon's Encyclopædia of Plants, (a most useful book, as far as any book in the present state of the science *can* be useful,) and find, under the head of Anthericum, the Savoy Lily indeed, but only the following general information:—"809. Anthericum. A name applied by the Greeks to the stem of the asphodel, and not misapplied to this set of plants, which in some sort resemble the asphodel. Plants with fleshy leaves, and spikes of bright *yellow* flowers, easily cultivated if kept dry."

Hunting further, I find again my Savoy lily called a spider-plant, under the article Hemerocallis, and the only information which the book gives me under Hemerocallis, is that it means 'beautiful day' lily; and then, "This is an ornamental genus of the easiest culture. The species are remarkable among border flowers for their fine *orange, yellow, or blue* flowers. The Hemerocallis *cœrulea* has been considered a distinct genus by Mr. Salisbury, and called Saussurea." As I correct this sheet for press, however, I find that the Hemerocallis is now to be called 'Funkia,' "in honour of Mr. Funk, a Prussian apothecary."

All this while, meantime, I have a suspicion that my pet Savoy Lily is not, in existing classification, an Anthericum, nor a Hemerocallis, but a Liliium. It is, in fact, simply a Turk's cap which doesn't curl up. But on trying 'Lilium' in Loudon, I find no mention whatever of any wild branched white lily.

I then try the next word in my specimen page of Curtis; but there is no 'Phalangium' at all in Loudon's index. And now I have neither time nor mind for more search, but will give, in due place, such account as I can of my own dwarf branched lily, which I shall call St. Bruno's, as well as this Liliastrum—no offence to the saint, I hope. For it grows very gloriously on the limestones of Savoy, presumably, therefore, at the Grande Chartreuse; though I did not notice it there, and made a very unmonkish use of it when I gathered

it last :—There was a pretty young English lady at the table-d'hôte, in the Hotel du Mont Blanc at St. Martin's,* and I wanted to get speech of her, and didn't know how. So all I could think of was to go half-way up the Aiguille de Varens, to gather St. Bruno's lilies ; and I made a great cluster of them, and put wild roses all around them as I came down. I never saw anything so lovely ; and I thought to present this to her before dinner,—but when I got down, she had gone away to Chamouni. My Fors always treated me like that, in affairs of the heart.

I had begun my studies of Alpine botany just eighteen years before, in 1842, by making a careful drawing of wood-sorrel at Chamouni ; and bitterly sorry I am, now, that the work was interrupted. For I drew, then, very delicately ; and should have made a pretty book if I could have got peace. Even yet, I can manage my point a little, and would far rather be making outlines of flowers, than writing ; and I meant to have drawn every English and Scottish wild flower, like this cluster of bog heather opposite,†—back, and profile, and front. But 'Blackwood's Magazine,' with its insults to Turner, dragged me into controversy ; and I have not had, properly speaking, a day's peace since ; so that in 1868 my botanical studies were advanced only as far as the reader will see in next chapter ; and now, in 1874, must end altogether, I suppose, heavier thoughts and work coming fast on me. So that, finding among my notebooks, two or three, full of broken materials for the proposed work on flowers ; and, thinking they may be useful even as fragments, I am going to publish them in their present state,—only let the reader note that while my other books endeavour, and claim, so far as they reach, to give trustworthy knowledge of their subjects, this one only shows how such knowledge may be obtained ; and it is little

* It was in the year 1860, in June.

† Admirably engraved by Mr. Burgess, from my pen drawing, now at Oxford. By comparing it with the plate of the same flower in Sowerby's work, the student will at once see the difference between attentive drawing, which gives the cadence and relation of masses in a group, and the mere copying of each flower in an unconsidered huddle.

more than a history of efforts and plans,—but of both, I believe, made in right methods.

One part of the book, however, will, I think, be found of permanent value. Mr. Burgess has engraved on wood, in reduced size, with consummate skill, some of the excellent old drawings in the *Flora Danica*, and has interpreted, and facsimile'd, some of his own and my drawings from nature, with a vigour and precision unsurpassed in woodcut illustration, which render these outlines the best exercises in black and white I have yet been able to prepare for my drawing pupils. The larger engravings by Mr. Allen may also be used with advantage as copies for drawings with pen or sepia.

ROME, 10th May (*my father's birthday*).

I found the loveliest blue asphodel I ever saw in my life, yesterday, in the fields beyond Monte Mario,—a spire two feet high, of more than two hundred stars, the stalks of them all deep blue, as well as the flowers. Heaven send all honest people the gathering of the like, in Elysian fields, some day!

PROSERPINA.

CHAPTER I.

MOSS.

DENMARK HILL, 3rd November, 1868.

1. It is mortifying enough to write,—but I think thus much ought to be written,—concerning myself, as ‘the author of Modern Painters.’ In three months I shall be fifty years old: and I don’t at this hour—ten o’clock in the morning of the two hundred and sixty-eighth day of my forty-ninth year—know what ‘moss’ is.

There is nothing I have more *intended* to know—some day or other. But the moss ‘would always be there’; and then it was so beautiful, and so difficult to examine, that one could only do it in some quite separated time of happy leisure—which came not. I never was like to have less leisure than now, but I *will* know what moss is, if possible, forthwith.

2. To that end I read preparatorily, yesterday, what account I could find of it in all the botanical books in the house. Out of them all, I get this general notion of a moss,—that it has a fine fibrous root,—a stem surrounded with spirally set leaves,—and produces its fruit in a small case, under a cap. I fasten especially, however, on a sentence of Louis Figuier’s, about the particular species, *Hypnum* :—

“These mosses, which often form little islets of verdure at the feet of poplars and willows, are robust vegetable organisms, which do not decay.”*

3. “Qui ne pourrissent point.” What do they do with themselves, then?—it immediately occurs to me to ask. And, secondly,—If this immortality belongs to the *Hypnum* only?

* “Histoire des Plantes.” Ed. 1865, p. 416.

It certainly does not, by any means : but, however modified or limited, this immortality is the first thing we ought to take note of in the mosses. They are, in some degree, what the “everlasting” is in flowers. Those minute green leaves of theirs do not decay, nor fall.

But how do they die, or how stop growing, then ?—it is the first thing I want to know about them. And from all the books in the house, I can’t as yet find out this. Meanwhile I will look at the leaves themselves.

4. Going out to the garden, I bring in a bit of old brick, emerald green on its rugged surface,* and a thick piece of mossy turf.

First, for the old brick : To think of the quantity of pleasure one has had in one’s life from that emerald green velvet,—and yet that for the first time to-day I am verily going to look at it ! Doing so, through a pocket lens of no great power, I find the velvet to be composed of small star-like groups of smooth, strong, oval leaves,—intensely green, and much like the young leaves of any other plant, except in this ;—they all have a long brown spike, like a sting, at their ends.



FIG. 1.

5. Fastening on that, I take the *Flora Danica*,† and look through its plates of mosses, for their leaves only ; and I find, first, that this spike, or strong central rib, is characteristic ;—secondly, that the said leaves are apt to be not only spiked, but serrated, and otherwise angry-looking at the points ;—thirdly, that they have a tendency to fold together in the centre (Fig. 1 ‡) ; and at last, after an hour’s work at them, it strikes me

* The like of it I have now painted, Number 281, CASE XII., in the Educational Series of Oxford.

† Properly, *Floræ Danicæ*, but it is so tiresome to print the diphthongs that I shall always call it thus. It is a folio series, exquisitely begun, a hundred years ago ; and not yet finished.

‡ Magnified about seven times. See note at end of this chapter.

suddenly that they are more like pineapple leaves than anything else.

And it occurs to me, very unpleasantly, at the same time, that I don't know what a pineapple is!

Stopping to ascertain that, I am told that a pineapple belongs to the 'Bromeliaceæ'—(can't stop to find out what that means)—nay, that of these plants "the pineapple is the representative" (Loudon); "their habit is acid, their leaves rigid, and toothed with spines, their bractæas often coloured with scarlet, and their flowers either white or blue"—(what are their flowers like?) But the two sentences that most interest me, are, that in the damp forests of Carolina, the *Tillandsia*, which is an 'epiphyte' (i.e., a plant growing on other plants,) "forms dense festoons among the branches of the trees, vegetating among the black mould that collects upon the bark of trees in hot damp countries; other species are inhabitants of deep and gloomy forests, and others form, with their spring leaves, an impenetrable herbage in the Pampas of Brazil." So they really seem to be a kind of moss, on a vast scale.

6. Next, I find in Gray,* *Bromeliaceæ*, and—the very thing I want—"Tillandsia, the black moss, or long moss, which, like most *Bromelias*, grows on the branches of trees." So the pineapple is really a moss; only it is a moss that flowers but 'imperfectly.' "The fine fruit is caused by the consolidation of the imperfect flowers." (I wish we could consolidate some imperfect English moss-flowers into little pineapples then,—though they were only as big as filberts.) But we cannot follow that farther now; nor consider when a flower is perfect, and when it is not, or we should get into morals, and I don't know where else; we will go back to the moss I have gathered, for I begin to see my way, a little, to understanding it.

7. The second piece I have on the table is a cluster—an inch or two deep—of the moss that grows everywhere, and that the birds use for nest-building, and we for packing, and

* American, -- 'System of Botany,' the best technical book I have.

the like. It is dry, since yesterday, and its fibres define themselves against the dark ground in warm green, touched with a glittering light. Note that burnished lustre of the minute leaves ; they are necessarily always relieved against dark hollows, and this lustre makes them much clearer and brighter than if they were of dead green. In that lustre—and it is characteristic of them—they differ wholly from the dead, aloelike texture of the pineapple leaf ; and remind me, as I look at them closely, a little of some conditions of chaff, as on heads of wheat after being threshed. I will hunt down that clue presently ; meantime there is something else to be noticed on the old brick.

8. Out of its emerald green cushions of minute leaves, there rise, here and there, thin red threads, each with a little brown cap, or something like a cap, at the top of it. These red threads shooting up out of the green tufts, are, I believe, the fructification of the moss ; fringing its surface in the woods, and on the rocks, with the small forests of brown stems, each carrying its pointed cap or crest—of infinitely varied ‘mode,’ as we shall see presently ; and, which is one of their most blessed functions, carrying high the dew in the morning ; every spear balancing its own crystal globe.

9. And now, with my own broken memories of moss, and this unbroken, though unfinished, gift of the noble labour of other people, the *Flora Danica*, I can generalize the idea of the precious little plant, for myself, and for the reader.

All mosses, I believe, (with such exceptions and collateral groups as we may afterwards discover, but they are not many,) that is to say, some thousands of species, are, in their strength of existence, composed of fibres surrounded by clusters of dry *spinous* leaves, set close to the fibre they grow on. Out of this leafy stem descends a fibrous root, and ascends in its season, a capped seed.

We must get this very clearly into our heads. Fig. 2, A, is a little tuft of a common wood moss of Norway,* in its fruit season, of its real size ; but at present I want to look at the

* ‘*Dicranum cerviculatum*,’ sequel to *Flora Danica*, Tab. MMCCX.

central fibre and its leaves accurately, and understand that first.

10. Pulling it to pieces, we find it composed of seven little company-keeping fibres, each of which, by itself, appears as in Fig. 2, B : but as in this, its real size, it is too small, not indeed for our respect, but for our comprehension, we magnify it, Fig. 2, c, and thereupon perceive it to be indeed composed of, *a*, the small fibrous root which sustains the plant ; *b*, the leaf-surrounded stem which is the actual being, and main creature, moss ; and, *c*, the aspirant pillar, and cap, of its fructification.

11. But there is one minor division yet. You see I have drawn the central part of the moss plant (*b*, Fig. 2,) half in outline and half in black ; and that, similarly, in the upper group, which is too small to show the real roots, the base of the cluster is black. And you remember, I doubt not, how often in gathering what most invited gathering, of deep green, starry, perfectly soft and living wood-moss, you found it fall asunder in your hand into multitudes of separate threads, each with its bright green crest, and long root of blackness.

That blackness at the root—though only so notable in this wood-moss and collateral species, is indeed a general character of the mosses, with rare exceptions. It is their funeral blackness ; —that, I perceive, is the way the moss leaves die. They do not fall—they do not visibly decay. But they decay invisibly, in continual secession, beneath the ascending crest. They rise to form that crest, all green and bright, and take the light and air from those out of which they grew ; and those, their ancestors, darken and die slowly, and at last become a mass of mouldering ground. In fact, as I perceive farther, their final duty is so to die. The main work of other leaves is in their life,—but these have to form the earth out of which



FIG. 2.

all other leaves are to grow. Not to cover the rocks with golden velvet only, but to fill their crannies with the dark earth, through which nobler creatures shall one day seek their being.

12. "Grant but as many sorts of mind as moss." Pope could not have known the hundredth part of the number of 'sorts' of moss there are; and I suppose he only chose the word because it was a monosyllable beginning with *m*, and the best English general expression for despised and minute structures of plants. But a fate rules the words of wise men, which makes their words truer, and worth more, than the men themselves know. No other plants have so endless variety on so similar a structure as the mosses; and none teach so well the humility of Death. As for the death of our bodies, we have learned, wisely, or unwisely, to look the fact of that in the face. But none of us, I think, yet care to look the fact of the death of our minds in the face. I do not mean death of our souls, but of our mental work. So far as it is good *art*, indeed, and done in realistic form, it may perhaps not die; but so far as it was only good *thought*—good, for its time, and apparently a great achievement therein—that good, useful thought may yet in the future become a foolish thought, and then die quite away,—it, and the memory of it,—when better thought and knowledge come. But the better thought could not have come if the weaker thought had not come first, and died in sustaining the better. If we think honestly, our thoughts will not only live usefully, but even perish usefully—like the moss—and become dark, not without due service. But if we think dishonestly, or malignantly, our thoughts will die like evil fungi,—dripping corrupt dew.

13. But farther. If you have walked moorlands enough to know the look of them, you know well those flat spaces or causeways of bright green or golden ground between the heathy rock masses; which signify winding pools and inlets of stagnant water caught among the rocks;—pools which the deep moss that covers them *blanched*, not black, at the root,—is slowly filling and making firm; whence generally the unsafe ground in the moorland gets known by being *mossy* instead of heathy, and is at last called by its riders, briefly,

'the Moss': and as it is mainly at these same mossy places that the riding is difficult, and brings out the gifts of horse and rider, and discomfits all followers not similarly gifted, the skilled crosser of them got his name, naturally, of 'moss-rider,' or moss-trooper. In which manner the moss of Norway and Scotland has been a taskmaster and Maker of Soldiers, as yet, the strongest known among natural powers. The lightning may kill a man, or cast down a tower, but these little tender leaves of moss—they and their progenitors—have trained the Northern Armies.

14. So much for the human meaning of that decay of the leaves. Now to go back to the little creatures themselves. It seems that the upper part of the moss fibre is especially undecaying among leaves; and the lower part, especially decaying. That, in fact, a plant of moss-fibre is a kind of persistent state of what is, in other plants, annual. Watch the year's growth of any luxuriant flower. First it comes out of the ground all fresh and bright; then, as the higher leaves and branches shoot up, those first leaves near the ground get brown, sickly, earthy,—remain for ever degraded in the dust, and under the dashed slime in rain, staining, and grieving, and loading them with obloquy of envious earth, half-killing them,—only life enough left in them to hold on the stem, and to be guardians of the rest of the plant from all they suffer;—while, above them, the happier leaves, for whom they are thus oppressed, bend freely to the sunshine, and drink the rain pure.

The moss strengthens on a diminished scale, intensifies, and makes perpetual, these two states,—bright leaves above that never wither, leaves beneath that exist only to wither.

15. I have hitherto spoken only of the fading moss as it is needed for change into earth. But I am not sure whether a yet more important office, in its days of age, be not its use as a colour.

We are all thankful enough—as far as we ever are so—for green moss, and yellow moss. But we are never enough grateful for black moss. The golden would be nothing without it, nor even the grey.

It is true that there are black lichens enough, and brown ones: nevertheless, the chief use of lichens is for silver and gold colour on rocks; and it is the dead moss which gives the leopard-like touches of black. And yet here again—as to a thing I have been looking at and painting all my life—I am brought to pause, the moment I think of it carefully. The black moss which gives the precious Velasquez touches, lies, much of it, flat on the rocks; radiating from its centres—powdering in the fingers, if one breaks it off, like dry tea. Is it a black species? or a black-parched state of other species, perishing for the sake of Velasquez effects, instead of accumulation of earth? and, if so, does it die of drought, accidentally, or, in a sere old age, naturally? and how is it related to the rich green bosses that grow in deep velvet? And there again is another matter not clear to me. One calls them ‘velvet’ because they are all brought to an even surface at the top. Our own velvet is reduced to such trimness by cutting. But how is the moss trimmed? By what scissors? Carefullest Elizabethan gardener never shaped his yew hedge more daintily than the moss fairies smooth these soft rounded surfaces of green and gold. And just fancy the difference, if they were ragged! If the fibres had every one of them leave to grow at their own sweet will, and to be long or short as they liked, or, worse still, urged by fairy prizes into laboriously and agonizingly trying which could grow longest. Fancy the surface of a spot of competitive moss!

16. But how is it that they are subdued into that spherical obedience, like a crystal of wavellite? * Strange—that the vegetable creatures growing so fondly on rocks should form themselves in that mineral-like manner. It is true that the tops of all well-grown trees are rounded, on a large scale, as equally; but that is because they grow from a central stem, while these mossy mounds are made out of independent filaments, each growing to exactly his proper height in the sphere—short ones outside, long in the middle. Stop, though; is that so? I am not even sure of that; perhaps they are built

* The reader should buy a small specimen of this mineral; it is a useful type of many structures.

over a little dome of decayed moss below.* I must find out how every filament grows, separately—from root to cap, through the spirally set leaves. And meanwhile I don't know very clearly so much as what a root is—or what a leaf is. Before puzzling myself any farther in examination either of moss or any other grander vegetable, I had better define these primal forms of all vegetation, as well as I can—or rather begin the definition of them, for future completion and correction. For, as my reader must already sufficiently perceive, this book is literally to be one of studies—not of statements. Some one said of me once, very shrewdly, When he wants to work out a subject, he writes a book on it. That is a very true saying in the main,—I work down or up to my mark, and let the reader see process and progress, not caring to conceal them. But this book will be nothing but process. I don't mean to assert anything positively in it from the first page to the last.

* LUCCA, *Aug. 9th*, 1874.—I have left this passage as originally written, but I believe the dome is of accumulated earth. Bringing home, here, evening after evening, heaps of all kinds of mosses from the hills among which the Archbishop Ruggieri was hunting the wolf and her whelps in Ugolino's dream, I am more and more struck, every day, with their special function as earth-gatherers, and with the enormous importance to their own brightness, and to our service, of that dark and degraded state of the inferior leaves. And it fastens itself in my mind mainly as their distinctive character, that as the leaves of a tree become wood, so the leaves of a moss become earth, while yet a normal part of the plant. Here is a cake in my hand weighing half a pound, bright green on the surface, with minute crisp leaves; but an inch thick beneath in what looks at first like clay, but is indeed knitted fibre of exhausted moss. Also, I don't at all find the generalization I made from the botanical books likely to have occurred to me from the real things. No moss leaves that I can find here give me the idea of resemblance to pineapple leaves; nor do I see any, through my weak lens, clearly serrated; but I do find a general tendency to run into a silky filamentous structure, and in some, especially on a small one gathered from the fissures in the marble of the cathedral, white threads of considerable length at the extremities of the leaves, of which threads I remember no drawing or notice in the botanical books. Figure 1 represents, magnified, a cluster of these leaves, with the germinating stalk springing from their centre; but my scrawl was tired and careless, and for once, Mr. Burgess has copied *too* accurately.

Whatever I say, is to be understood only as a conditional statement—liable to, and inviting, correction. And this the more because, as on the whole, I am at war with the botanists, I can't ask them to help me, and then call them names afterwards. I hope only for a contemptuous heaping of coals on my head by correction of my errors from them ; in some cases, my scientific friends will, I know, give me forgiving aid ;—but, for many reasons, I am forced first to print the imperfect statement, as I can independently shape it ; for if once I asked for, or received help, every thought would be frost-bitten into timid expression, and every sentence broken by apology. I should have to write a dozen of letters before I could print a line, and the line, at last, would be only like a bit of any other botanical book—trustworthy, it might be, perhaps ; but certainly unreadable. Whereas now, it will rather put things more forcibly in the reader's mind to have them retouched and corrected as we go on ; and our natural and honest mistakes will often be suggestive of things we could not have discovered but by wandering.

On these guarded conditions, then, I proceed to study, with my reader, the first general laws of vegetable form.

CHAPTER II.

THE ROOT.

1. PLANTS in their perfect form consist of four principal parts,—the Root, Stem, Leaf, and Flower. It is true that the stem and flower are parts, or remnants, or altered states, of the leaves ; and that, speaking with close accuracy, we might say, a perfect plant consists of leaf and root. But the division into these four parts is best for practical purposes, and it will be desirable to note a few general facts about each, before endeavouring to describe any one kind of plant. Only, because the character of the stem depends on the nature of the leaf and flower, we must put it last in order of examination ; and trace the development of the plant first in root and leaf ; then in the flower and its fruit ; and lastly in the stem.

2. First, then, the Root.

Every plant is divided, as I just said, in the main, into two parts, and these have opposite natures. One part seeks the light ; the other hates it. One part feeds on the air ; the other on the dust.

The part that loves the light is called the Leaf. It is an old Saxon word ; I cannot get at its origin. The part that hates the light is called the Root.

In Greek, *ρίζα*, *Rhiza*.*

In Latin, *Radix*, “the growing thing,” which shortens, in French, into *Race*, and then they put on the diminutive ‘*ine*,’ and get their two words, *Race*, and *Racine*, of which we keep *Race* for animals, and use for vegetables a word of our own Saxon (and Dutch) dialect,—‘*root* ;’ (connected with *Rood*—an image of wood ; whence at last the Holy Rood, or Tree).

3. The Root has three great functions :

1st. To hold the plant in its place.

2nd. To nourish it with earth.

3rd. To receive vital power for it from the earth.

With this last office is in some degree,—and especially in certain plants,—connected, that of reproduction.

But in all plants the root has these three essential functions.

First, I said, to hold the Plant in its place. The Root is its Fetter.

You think it, perhaps, a matter of course that a plant is not to be a crawling thing ? It is not a matter of course at all. A vegetable might be just what it is now, as compared with an animal ;—might live on earth and water instead of on meat, —might be as senseless in life, as calm in death, and in all its parts and apparent structure unchanged ; and yet be a crawling thing. It is quite as easy to conceive plants moving about like lizards, putting forward first one root and then another, as it is to think of them fastened to their place. It might have been well for them, one would have thought, to have the power

* Learn this word, at any rate ; and if you know any Greek, learn also this group of words : “*ὡς ρίζα ἐν γῇ δαΐωσιν*,” which you may chance to meet with, and even to think about, some day.

of going down to the streams to drink, in time of drought ;—of migrating in winter with grim march from north to south of Dunsinane Hill side. But that is not their appointed Fate. They are—at least all the noblest of them, rooted to their spot. Their honour and use is in giving immoveable shelter,—in remaining landmarks, or lovemarks, when all else is changed :

“ The cedars wave on Lebanon,
But Judah’s statelier maids are gone.”

4. Its root is thus a form of fate to the tree. It condemns, or indulges it, in its place. These semi-living creatures, come what may, shall abide, happy, or tormented. No doubt concerning “ the position in which Providence has placed *them*,” is to trouble their minds, except so far as they can mend it by seeking light, or shrinking from wind, or grasping at support, within certain limits. In the thoughts of men they have thus become twofold images,—on the one side, of spirits restrained and half destroyed, whence the fables of transformation into trees ; on the other, of spirits patient and continuing, having root in themselves and in good ground, capable of all persistent effort and vital stability, both in themselves, and for the human States they form.

5. In this function of holding fast, roots have a power of grasp quite different from that of branches. It is not a grasp, or clutch by contraction, as that of a bird’s claw, or of the small branches we call ‘tendrils’ in climbing plants. It is a dead, clumsy, but inevitable grasp, by swelling, *after* contortion. For there is this main difference between a branch and root, that a branch cannot grow vividly but in certain directions and relations to its neighbour branches ; but a root can grow wherever there is earth, and can turn in any direction to avoid an obstacle.*

* “ Duhamel, botanist of the last century, tells us that, wishing to preserve a field of good land from the roots of an avenue of elms which were exhausting it, he cut a ditch between the field and avenue to intercept the roots. But he saw with surprise those of the roots which had not been cut, go down behind the slope of the ditch to keep out of

6. In thus contriving access for itself where it chooses, a root contorts itself into more serpent-like writhing than branches can ; and when it has once coiled partly round a rock, or stone, it grasps it tight, necessarily, merely by swelling. Now a root has force enough sometimes to split rocks, but not to crush them ; so it is compelled to grasp by *flattening* as it thickens ; and, as it must have room somewhere, it alters its own shape as if it were made of dough, and holds the rock, not in a claw, but in a wooden cast or mould, adhering to its surface. And thus it not only finds its anchorage in the rock, but binds the rocks of its anchorage with a constrictor cable.

7. Hence—and this is a most important secondary function—roots bind together the ragged edges of rocks as a hem does the torn edge of a dress : they literally stitch the stones together ; so that, while it is always dangerous to pass under a treeless edge of overhanging crag, as soon as it has become beautiful with trees, it is safe also. The rending power of roots on rocks has been greatly overrated. Capillary attraction in a willow wand will indeed split granite, and swelling roots sometimes heave considerable masses aside, but on the whole, roots, small and great, bind, and do not rend.* The surfaces of mountains are dissolved and disordered, by rain, and frost, and chemical decomposition, into mere heaps of loose stones on their desolate summits ; but, where the forests grow, soil accumulates and disintegration ceases. And by cutting down forests on great mountain slopes, not only is the climate destroyed, but the danger of superficial landslip fearfully increased.

8. The second function of roots is to gather for the plant the nourishment it needs from the ground. This is partly water, mixed with some kinds of air (ammonia, etc.) but the

the light, go under the ditch, and into the field again.” And the Swiss naturalist Bonnet said wittily, apropos of a wonder of this sort, “that sometimes it was difficult to distinguish a cat from a rosebush.”

* As the first great office of the mosses is the gathering of earth, so that of the grasses is the binding of it. Theirs the Enchanter’s toil, not in vain,—making ropes out of sea-sand.

plant can get both water and ammonia from the atmosphere ; and, I believe, for the most part does so ; though, when it cannot get water from the air, it will gladly drink by its roots. But the things it cannot receive from the air at all are certain earthy salts, essential to it (as iron is essential in our own blood), and of which when it has quite exhausted the earth, no more such plants can grow in that ground. On this subject you will find enough in any modern treatise on agriculture ; all that I want you to note here is that this feeding function of the root is of a very delicate and discriminating kind, needing much searching and mining among the dust, to find what it wants. If it only wanted water, it could get most of that by spreading in mere soft senseless limbs, like sponge, as far, and as far down, as it could—but to get the *salt* out of the earth it has to *sift* all the earth, and taste and touch every grain of it that it can, with fine fibres. And therefore a root is not at all a merely passive sponge or absorbing thing, but an infinitely subtle tongue, or tasting and eating thing. That is why it is always so fibrous and divided and entangled in the clinging earth.

9. “Always fibrous and divided”? But many roots are quite hard and solid!

No ; the active part of the root is always, I believe, a fibre. But there is often a provident and passive part—a savings bank of root—in which nourishment is laid up for the plant, and which, though it may be underground, is no more to be considered its real root than the kernel of a seed is. When you sow a pea, if you take it up in a day or two, you will find the fibre below, which is root ; the shoot above, which is plant : and the pea as a now partly exhausted storehouse, looking very woful, and like the granaries of Paris after the fire. So the round solid root of a cyclamen, or the conical one which you know so well as a carrot, are not properly roots, but permanent storehouses,—only the fibres that grow from them are roots. Then there are other apparent roots which are not even storehouses, but refuges ; houses where the little plant lives in its infancy, through winter and rough weather. So that it will be best for you at once to limit your idea of a root to this,—

that it is a group of growing fibres which taste and suck what is good for the plant out of the ground, and by their united strength hold it in its place: only remember the thick limbs of roots do not feed, but only the fine fibres at the ends of them which are something between tongues and sponges, and while they absorb moisture readily, are yet as particular about getting what they think nice to eat as any dainty little boy or girl; looking for it everywhere, and turning angry and sulky if they don't get it.

10. But the root has, it seems to me, one more function, the most important of all. I say, it seems to me, for observe, what I have hitherto told you is all (I believe) ascertained and admitted; this that I am going to tell you has not yet, as far as I know, been asserted by men of science, though I believe it to be demonstrable. But you are to examine into it, and think of it for yourself.

There are some plants which appear to derive all their food from the air—which need nothing but a slight grasp of the ground to fix them in their place. Yet if we were to tie them into that place, in a framework, and cut them from their roots, they would die. Not only in these, but in all other plants, the vital power by which they shape and feed themselves, whatever that power may be, depends, I think, on that slight touch of the earth, and strange inheritance of its power. It is as essential to the plant's life as the connection of the head of an animal with its body by the spine is to the animal. Divide the feeble nervous thread, and all life ceases. Nay, in the tree the root is even of greater importance. You will not kill the tree, as you would an animal, by dividing its body or trunk. The part not severed from the root will shoot again. But in the root, and its touch of the ground, is the life of it. My own definition of a plant would be "a living creature whose source of vital energy is in the earth" (or in the water, as a form of the earth; that is, in inorganic substance). There is, however, one tribe of plants which seems nearly excepted from this law. It is a very strange one, having long been noted for the resemblance of its flowers to different insects; and it has recently been proved by Mr. Darwin to be depend-

ent on insects for its existence. Doubly strange therefore, it seems, that in some cases this race of plants all but reaches the independent life of insects. It rather *settles* upon boughs than roots itself in them ; half of its roots may wave in the air.

11. What vital power is, men of science are not a step nearer knowing than they were four thousand years ago. They are, if anything, farther from knowing now than then, in that they imagine themselves nearer. But they know more about its limitations and manifestations than they did. They have even arrived at something like a proof that there is a fixed quantity of it flowing out of things and into them. But, for the present, rest content with the general and sure knowledge that, fixed or flowing, measurable or immeasurable—one with electricity or heat or light, or quite distinct from any of them—life is a delightful, and its negative, death, a dreadful thing, to human creatures ; and that you can give or gather a certain quantity of life into plants, animals, and yourself by wisdom and courage, and by their reverses can bring upon them any quantity of death you please, which is a much more serious point for you to consider than what life and death are.

12. Now, having got a quite clear idea of a root properly so called, we may observe what those storehouses, refuges, and ruins are, which we find connected with roots. The greater number of plants feed and grow at the same time ; but there are some of them which like to feed first and grow afterwards. For the first year, or, at all events, the first period of their life, they gather material for their future life out of the ground and out of the air, and lay it up in a storehouse as bees make combs. Of these stores—for the most part rounded masses tapering downwards into the ground—some are as good for human beings as honeycombs are ; only not so sweet. We steal them from the plants, as we do from the bees, and these conical upside-down hives or treasuries of Atreus, under the names of carrots, turnips, and radishes, have had important influence on human fortunes. If we do not steal the store, next year the plant lives upon it, raises its stem, flowers and seeds out of that abundance, and having fulfilled its destiny, and provided for its successor, passes away, root and branch together.

13. There is a pretty example of patience for us in this ; and it would be well for young people generally to set themselves to grow in a carrotty or turnippy manner, and lay up secret store, not caring to exhibit it until the time comes for fruitful display. But they must not, in after-life, imitate the spendthrift vegetable, and blossom only in the strength of what they learned long ago ; else they soon come to contemptible end. Wise people live like laurels and cedars, and go on mining in the earth, while they adorn and embalm the air.

14. Secondly, Refuges. As flowers growing on trees have to live for some time, when they are young in their buds, so some flowers growing on the ground have to live for a while, when they are young, *in* what we call their roots. These are mostly among the Drosidæ* and other humble tribes, loving the ground ; and, in their babyhood, liking to live quite down in it. A baby crocus has literally its own little dome—domus, or duomo—within which in early spring it lives a delicate convent life of its own, quite free from all worldly care and dangers, exceedingly ignorant of things in general, but itself brightly golden and perfectly formed before it is brought out. These subterranean palaces and vaulted cloisters, which we call bulbs, are no more roots than the blade of grass is a root, in which the ear of corn forms before it shoots up.

15. Thirdly, Ruins. The flowers which have these subterranean homes form one of many families whose roots, as well as seeds, have the power of reproduction. The succession of some plants is trusted much to their seeds : a thistle sows itself by its down, an oak by its acorns ; the companies of flying emigrants settle where they may ; and the shadowy tree is content to cast down its showers of nuts for swine's food with the chance that here and there one may become a ship's bulwark. But others among plants are less careless, or less proud. Many are anxious for their children to grow in the place where they grew themselves, and secure this not merely by letting their fruit fall at their feet, on the chance of its

* Drosidæ, in our school nomenclature, is the general name, including the four great tribes, iris, asphodel, amaryllis, and lily. See reason for this name given in the 'Queen of the Air,' Section II.

growing up beside them, but by closer bond, bud springing forth from root, and the young plant being animated by the gradually surrendered life of its parent. Sometimes the young root is formed above the old one, as in the crocus, or beside it, as in the amaryllis, or beside it in a spiral succession, as in the orchis ; in these cases the old root always perishes wholly when the young one is formed ; but in a far greater number of tribes, one root connects itself with another by a short piece of intermediate stem ; and this stem does not at once perish when the new root is formed, but grows on at one end indefinitely, perishing slowly at the other, the scars or ruins of the past plants being long traceable on its sides. When it grows entirely underground it is called a root-stock. But there is no essential distinction between a root-stock and a creeping stem, only the root-stock may be thought of as a stem which shares the melancholy humour of a root in loving darkness, while yet it has enough consciousness of better things to grow towards, or near, the light. In one family it is even fragrant where the flower is not, and a simple house-leek is called '*rhodiola rosea*,' because its root-stock has the scent of a rose.

16. There is one very unusual condition of the root-stock which has become of much importance in economy, though it is of little in botany ; the forming, namely, of knots at the ends of the branches of the underground stem, where the new roots are to be thrown out. Of these knots, or 'tubers,' (swollen things,) one kind, belonging to the tobacco tribe, has been singularly harmful, together with its pungent relative, to a neighbouring country of ours, which perhaps may reach a higher destiny than any of its friends can conceive for it, if it can ever succeed in living without either the potato, or the pipe.

17. Being prepared now to find among plants many things which are like roots, yet are not ; you may simplify and make fast your true idea of a root as a fibre or group of fibres, which fixes, animates, and partly feeds the leaf. Then practically, as you examine plants in detail, ask first respecting them : What kind of root have they ? Is it large or small in

proportion to their bulk, and why is it so? What soil does it like, and what properties does it acquire from it? The endeavour to answer these questions will soon lead you to a rational inquiry into the plant's history. You will first ascertain what rock or earth it delights in, and what climate and circumstances; then you will see how its root is fitted to sustain it mechanically under given pressures and violences, and to find for it the necessary sustenance under given difficulties of famine or drought. Lastly you will consider what chemical actions appear to be going on in the root, or its store; what processes there are, and elements, which give pungency to the radish, flavour to the onion, or sweetness to the liquorice; and of what service each root may be made capable under cultivation, and by proper subsequent treatment, either to animals or men.

18. I shall not attempt to do any of this for you; I assume, in giving this advice, that you wish to pursue the science of botany as your chief study; I have only broken moments for it, snatched from my chief occupations, and I have done nothing myself of all this I tell you to do. But so far as you can work in this manner, even if you only ascertain the history of one plant, so that you know that accurately, you will have helped to lay the foundation of a true science of botany, from which the mass of useless nomenclature,* now mistaken for science, will fall away, as the husk of a poppy falls from the bursting flower.

CHAPTER III.

THE LEAF.

1. IN the first of the poems of which the English Government has appointed a portion to be sung every day for the in-

* The only use of a great part of our existing nomenclature is to enable one botanist to describe to another a plant which the other has not seen. When the science becomes approximately perfect, all known plants will be properly figured, so that nobody need describe them; and unknown plants be so rare that nobody will care to learn a new and difficult language, in order to be able to give an account of what in all probability he will never see.

struction and pleasure of the people, there occurs this curious statement respecting any person who will behave himself rightly: "He shall be like a tree planted by the river side, that bears its fruit in its season. His leaf also shall not wither; and you will see that whatever he does will prosper."

I call it a curious statement, because the conduct to which this prosperity is promised is not that which the English, as a nation, at present think conducive to prosperity: but whether the statement be true or not, it will be easy for you to recollect the two eastern figures under which the happiness of the man is represented,—that he is like a tree bearing fruit: "in its season;" (not so hastily as that the frost pinch it, nor so late that no sun ripens it;) and that "his leaf shall not fade." I should like you to recollect this phrase in the Vulgate—"folium ejus non defluet"—shall not fall *away*,—that is to say, shall not fall so as to leave any visible bareness in winter time, but only that others may come up in its place, and the tree be always green.

2. Now, you know, the fruit of the tree is either for the continuance of its race, or for the good, or harm, of other creatures. In no case is it a good to the tree itself. It is not indeed, properly, a part of the tree at all, any more than the egg is part of the bird, or the young of any creature part of the creature itself. But in the leaf is the strength of the tree itself. Nay, rightly speaking, the leaves *are* the tree itself. Its trunk sustains; its fruit burdens and exhausts; but in the leaf it breathes and lives. And thus also, in the eastern symbolism, the fruit is the labour of men for others; but the leaf is their own life. "He shall bring forth fruit, in his time; and his own joy and strength shall be continual."

3. Notice next the word 'folium.' In Greek, *φυλλον*, 'phyllon.'

"The thing that is born," or "put forth." "When the branch is tender, and putteth forth her leaves, ye know that summer is nigh." The botanists say, "The leaf is an expansion of the bark of the stem." More accurately, the bark is a contraction of the tissue of the leaf. For every leaf is born out of the earth, and breathes out of the air; and there are

many leaves that have no stems, but only roots. It is 'the springing thing'; this thin film of life; rising, with its *edge* out of the ground—infinately feeble, infinitely fair. With *Folium*, in Latin, is rightly associated the word *Flos*; for the flower is only a group of singularly happy leaves. From these two roots come *foglio*, *feuille*, *feuillage*, and *fleur*;—*blume*, blossom, and bloom; our foliage, and the borrowed foil, and the connected technical groups of words in architecture and the sciences.

4. This *thin* film, I said. That is the essential character of a leaf; to be thin,—widely spread out in proportion to its mass. It is the opening of the substance of the earth to the air, which is the giver of life. The Greeks called it, therefore, not only the born or blooming thing, but the spread or expanded thing—"πεταλον." Pindar calls the beginnings of quarrel, "petals of quarrel." Recollect, therefore, this form, *Petalos*; and connect it with *Petasos*, the expanded cap of Mercury. For one great use of both is to give shade. The root of all these words is said to be ΠΕΤ (*Pet*), which may easily be remembered in Greek, as it sometimes occurs in no unpleasant sense in English.

5. But the word '*petalos*' is connected in Greek with another word, meaning to fly,—so that you may think of a bird as spreading its petals to the wind; and with another, signifying Fate in its pursuing flight, the overtaking thing, or overflying Fate. Finally, there is another Greek word meaning 'wide,' πλατυς (*platys*); whence at last our '*plate*'—a thing made broad or extended—but especially made broad or 'flat' out of the solid, as in a lump of clay extended on the wheel, or a lump of metal extended by the hammer. So the first we call *Platter*; the second *Plate*, when of the precious metals. Then putting *b* for *p*, and *d* for *t*, we get the blade of an oar, and blade of grass.

6. Now gather a branch of laurel, and look at it carefully. You may read the history of the being of half the earth in one of those green oval leaves—the things that the sun and the rivers have made out of dry ground. *Daphne*—daughter of *Enipeus*, and beloved by the Sun,—that fable gives you at

once the two great facts about vegetation. Where warmth is, and moisture—there also, the leaf. Where no warmth—there is no leaf ; where there is no dew—no leaf.

7. Look, then, to the branch you hold in your hand. That you *can* so hold it, or make a crown of it, if you choose, is the first thing I want you to note of it ;—the proportion of size, namely, between the leaf and *you*. Great part of your life and character, as a human creature, has depended on that. Suppose all leaves had been spacious, like some palm leaves ; solid, like cactus stem ; or that trees had grown, as they might of course just as easily have grown, like mushrooms, all one great cluster of leaf round one stalk. I do not say that they are divided into small leaves only for your delight, or your service, as if you were the monarch of everything—even in this atom of a globe. You are made of your proper size ; and the leaves of theirs : for reasons, and by laws, of which neither the leaves nor you know anything. Only note the harmony between both, and the joy we may have in this division and mystery of the frivolous and tremulous petals, which break the light and the breeze,—compared to what, with the frivolous and the tremulous mind which is in us, we could have had out of domes, or penthouses, or walls of leaf.

8. Secondly ; think awhile of its dark clear green, and the good of it to you. Scientifically, you know green in leaves is owing to ‘chlorophyll,’ or, in English, to ‘green-leaf.’ It may be very fine to know that ; but my advice to you, on the whole, is to rest content with the general fact that leaves are green when they do not grow in or near smoky towns ; and not by any means to rest content with the fact that very soon there will not be a green leaf in England, but only greenish-black ones. And thereon resolve that you will yourself endeavour to promote the growing of the green wood, rather than of the black.

9. Looking at the back of your laurel-leaves, you see how the central rib or spine of each, and the lateral branchings, strengthen and carry it. I find much confused use, in botanical works, of the words Vein and Rib. For, indeed, there are veins *in* the ribs of leaves, as marrow in bones ; and the pro-

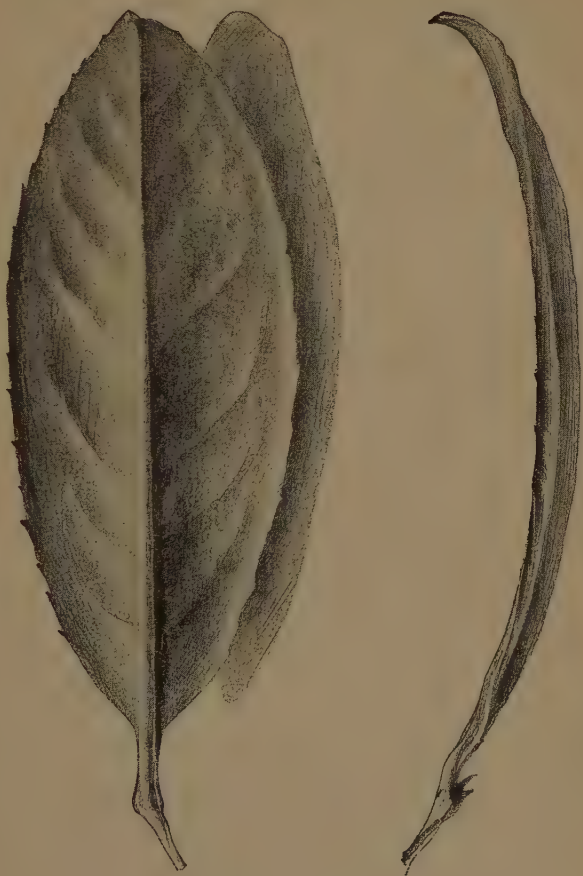


PLATE II.—CENTRAL TYPE OF LEAVES. COMMON BAY LAUREL.

jecting bars often gradually depress themselves into a transparent net of rivers. But the *mechanical* force of the framework in carrying the leaf-tissue is the point first to be noticed ; it is that which admits, regulates, or restrains the visible motions of the leaf ; while the system of circulation can only be studied through the microscope. But the ribbed leaf bears itself to the wind, as the webbed foot of a bird does to the water, and needs the same kind, though not the same strength, of support ; and its ribs always are partly therefore constituted of strong woody substance, which is knit out of the tissue ; and you can extricate this skeleton framework, and keep it, after the leaf-tissue is dissolved. So I shall henceforward speak simply of the leaf and its ribs,—only specifying the additional veined structure on necessary occasions.

10. I have just said that the ribs—and might have said, farther, the stalk that sustains them—are knit out of the *tissue* of the leaf. But what is the leaf tissue itself knit out of ? One would think that was nearly the first thing to be discovered, or at least to be thought of, concerning plants,—namely, how and of what they are made. We say they ‘grow.’ But you know that they can’t grow out of nothing ;—this solid wood and rich tracery must be made out of some previously existing substance. What is the substance?—and how is it woven into leaves,—twisted into wood ?

11. Consider how fast this is done, in spring. You walk in February over a slippery field, where, through hoar-frost and mud, you perhaps hardly see the small green blades of trampled turf. In twelve weeks you wade through the same field up to your knees in fresh grass ; and in a week or two more, you mow two or three solid haystacks off it. In winter you walk by your currant-bush, or your vine. They are shrivelled sticks—like bits of black tea in the canister. You pass again in May, and the currant-bush looks like a young sycamore tree ; and the vine is a bower : and meanwhile the forests, all over this side of the round world, have grown their foot or two in height, with new leaves—so much deeper, so much denser than they were. Where has it all come from ? Cut off the fresh shoots from a single branch of

any tree in May. Weigh them ; and then consider that so much weight has been added to every such living branch, everywhere, this side the equator, within the last two months. What is all that made of ?

12. Well, this much the botanists really know, and tell us,—It is made chiefly of the breath of animals ; that is to say, of the substance which, during the past year, animals have breathed into the air ; and which, if they went on breathing, and their breath were not made into trees, would poison them, or rather suffocate them, as people are suffocated in uncleansed pits, and dogs in the Grotta del Cane. So that you may look upon the grass and forests of the earth as a kind of green hoar-frost, frozen upon it from our breath, as, on the window-panes, the white arborescence of ice.

13. But how is it made into wood ?

The substances that have been breathed into the air are charcoal, with oxygen and hydrogen,—or, more plainly, charcoal and water. Some necessary earths,—in smaller quantity, but absolutely essential,—the trees get from the ground ; but, I believe all the charcoal they want, and most of the water, from the air. Now the question is, where and how do they take it in, and digest it into wood ?

14. You know, in spring, and partly through all the year, except in frost, a liquid called ‘sap’ circulates in trees, of which the nature, one should have thought, might have been ascertained by mankind in the six thousand years they have been cutting wood. Under the impression always that it *had been* ascertained, and that I could at any time know all about it, I have put off till to-day, 19th October, 1869, when I am past fifty, the knowing anything about it at all. But I will really endeavour now to ascertain something, and take to my botanical books, accordingly, in due order.

(1) Dresser’s “Rudiments of Botany.” ‘Sap’ not in the index ; only Samara, and Sarcocarp,—about neither of which I feel the smallest curiosity. (2) Figuier’s “Histoire des Plantes.”* ‘Sève,’ not in index ; only Serpolet, and *Sherrardia arvensis*, which also have no help in them for me.

* An excellent book, nevertheless.

(3) Balfour's "Manual of Botany." 'Sap,'—yes, at last. "Article 257. Course of fluids in exogenous stems." I don't care about the course just now: I want to know where the fluids come from. "If a plant be plunged into a weak solution of acetate of lead,"—I don't in the least want to know what happens. "From the minuteness of the tissue, it is not easy to determine the vessels through which the sap moves." Who said it was? If it had been easy, I should have done it myself. "Changes take place in the composition of the sap in its upward course." I dare say; but I don't know yet what its composition is before it begins going up. "The Elaborated Sap by Mr. Schultz has been called 'latex.'" I wish Mr. Schultz were in a hogshead of it, with the top on. "On account of these movements in the latex, the laticiferous vessels have been denominated cinenchymatous." I do not venture to print the expressions which I here mentally make use of.

15. Stay,—here, at last, in Article 264, is something to the purpose: "It appears then that, in the case of Exogenous plants, the fluid matter in the soil, containing different substances in solution, is sucked up by the extremities of the roots." Yes, but how of the pine trees on yonder rock?—Is there any sap in the rock, or water either? The moisture must be seized during actual rain on the root, or stored up from the snow; stored up, any way, in a tranquil, not actively sappy, state, till the time comes for its change, of which there is no account here.

16. I have only one chance left now. Lindley's "Introduction to Botany." 'Sap,'—yes,—'General motion of.' II. 325. "The course which is taken by the sap, after entering a plant, is the first subject for consideration." My dear doctor, I have learned nearly whatever I know of plant structure from you, and am grateful; and that it is little, is not your fault, but mine. But this—let me say it with all sincere respect—is not what you should have told me here. You know, far better than I, that 'sap' never does enter a plant at all; but only salt, or earth and water, and that the roots alone could not make it; and that, therefore, the course of it must be, in great part, the result or process of the actual making. But I

will read now, patiently ; for I know you will tell me much that is worth hearing, though not perhaps what I want.

Yes ; now that I have read Lindley's statement carefully, I find it is full of precious things ; and this is what, with thinking over it, I can gather for you.

17. First, towards the end of January,—as the light enlarges, and the trees revive from their rest,—there is a general liquefaction of the blood of St. Januarius in their stems ; and I suppose there is really a great deal of moisture rapidly absorbed from the earth in most cases ; and that this absorption is a great help to the sun in drying the winter's damp out of it for us : then, with that strange vital power,—which scientific people are usually as afraid of naming as common people are afraid of naming Death,—the tree gives the gathered earth and water a changed existence ; and to this new-born liquid an upward motion from the earth, as our blood has from the heart ; for the life of the tree is out of the earth ; and this upward motion has a mechanical power in pushing on the growth. “*Forced onward* by the current of sap, the plumule ascends,” (Lindley, p. 132,)—this blood of the tree having to supply, exactly as our own blood has, not only the forming powers of substance, but a continual evaporation, “approximately seventeen times more than that of the human body,” while the force of motion in the sap “is sometimes five times greater than that which impels the blood in the crural artery of the horse.”

18. Hence generally, I think we may conclude thus much,—that at every pore of its surface, under ground and above, the plant in the spring absorbs moisture, which instantly disperses itself through its whole system “by means of some permeable quality of the membranes of the cellular tissue invisible to our eyes even by the most powerful glasses” (p. 326) ; that in this way subjected to the vital power of the tree, it becomes sap, properly so called, which passes downwards through this cellular tissue, slowly and secretly ; and then upwards, through the great vessels of the tree, violently, stretching out the supple twigs of it as you see a flaccid waterpipe swell and move when the cock is turned to fill it. And the

tree becomes literally a fountain, of which the springing streamlets are clothed with new-woven garments of green tissue, and of which the silver spray stays in the sky,—a spray, now, of leaves.

19. That is the gist of the matter ; and a very wonderful gist it is, to my mind. The secret and subtle descent—the violent and exulting resilience of the tree's blood,—what guides it ?—what compels ? The creature has no heart to beat like ours ; one cannot take refuge from the mystery in a 'muscular contraction.' Fountain without supply—playing by its own force, for ever rising and falling all through the days of Spring, spending itself at last in gathered clouds of leaves, and iris of blossom.

Very wonderful ; and it seems, for the present, that we know nothing whatever about its causes ; nay, the strangeness of the reversed arterial and vein motion, without a heart, does not not seem to strike anybody. Perhaps, however, it may interest you, as I observe it does the botanists, to know that the cellular tissue through which the motion is effected is called Parenchym, and the woody tissue, Bothrenchym ; and that Parenchym is divided, by a system of nomenclature which "has some advantages over that more commonly in use," * into merenchyma, conenchyma, ovenchyma, atractenchyma, cylindrenchyma, colpenchyma, cladenchyma, and prismenchyma.

20. Take your laurel branch into your hand again. There are, as you must well know, innumerable shapes and orders of leaves ;—there are some like claws ; some like fingers, and some like feet ; there are endlessly cleft ones, and endlessly clustered ones, and inscrutable divisions within divisions of the fretted verdure ; and wrinkles, and ripples, and stitchings, and hemmings, and pinchings, and gatherings, and crumplings, and clippings, and what not. But there is nothing so constantly noble as the pure leaf of the laurel, bay, orange, and olive ; numerable, sequent, perfect in setting,

* Lindley, 'Introduction to Botany,' vol. i., p. 21. The terms "wholly obsolete" says an authoritative botanic friend. Thank Heaven !

divinely simple and serene. I shall call these noble leaves 'Apolline' leaves. They characterize many orders of plants, great and small,—from the magnolia to the myrtle, and exquisite 'myrtile' of the hills, (bilberry); but wherever you find them, strong, lustrous, dark green, simply formed, richly scented or stored,—you have nearly always kindly and lovely vegetation, in healthy ground and air.

21. The gradual diminution in rank beneath the Apolline leaf, takes place in others by the loss of one or more of the qualities above named. The Apolline leaf, I said, is strong, lustrous, full in its green, rich in substance, simple in form. The inferior leaves are those which have lost strength, and become thin, like paper; which have lost lustre, and become dead by roughness of surface, like the nettle,—(an Apolline leaf may become dead by *bloom*, like the olive, yet not lose beauty); which have lost colour and become feeble in green, as in the poplar, or *crudely* bright, like rice; which have lost substance and softness, and have nothing to give in scent or nourishment; or become flinty or spiny; finally, which have lost simplicity, and become cloven or jagged. Many of these losses are partly atoned for by gain of some peculiar loveliness. Grass and moss, and parsley and fern, have each their own delightfulness; yet they are all of inferior power and honour, compared to the Apolline leaves.

22. You see, however, that though your laurel leaf has a central stem, and traces of ribs branching from it, in a vertebrated manner, they are so faint that we cannot take it for a type of vertebrate structure. But the two figures of elm and alisma leaf, given in *Modern Painters* (vol. iii.), and now here repeated, Fig. 3, will clearly enough show the opposition between this vertebrate form, branching again usually at the edges, *a*, and the softly opening lines diffused at the stem, and gathered at the point of the leaf, *b*, which, as you almost without doubt know already, are characteristic of a vast group of plants, including especially all the lilies, grasses, and palms, which for the most part are the signs of local or temporary moisture in hot countries;—local, as of fountains and streams; temporary, as of rain or inundation.

But temporary, still more definitely in the day, than in the year. When you go out, delighted, into the dew of the morning, have you ever considered why it is so rich upon the grass;—why it is *not* upon the trees? It is partly on the trees, but yet your memory of it will be always chiefly of its gleam upon the lawn. On many trees you will find there is none at all. I cannot follow out here the many inquiries connected with this subject, but, broadly, remember the branched trees are fed chiefly by rain,—the unbranched ones by dew, visible or invisible; that is to say, at all events by moisture which they



FIG. 3.

can gather for themselves out of the air; or else by streams and springs. Hence the division of the verse of the song of Moses: "My doctrine shall drop as the rain; my speech shall distil as the dew: as the *small* rain upon the tender *herb*, and as the showers upon the grass."

23. Next, examining the direction of the veins in the leaf of the alisma, *b*, Fig. 3, you see they all open widely, as soon as they can, towards the thick part of the leaf; and then taper, apparently with reluctance, pushing each other outwards, to the point. If the leaf were a lake of the same shape, and its stem the entering river, the lines of the currents passing through

it would, I believe, be nearly the same as that of the veins in the aquatic leaf. I have not examined the fluid law accurately, and I do not suppose there is more real correspondence than may be caused by the leaf's expanding in every permitted direction, as the water would, with all the speed it can ; but the resemblance is so close as to enable you to fasten the relation of the unbranched leaves to streams more distinctly in your mind,—just as the toss of the palm leaves from their stem may, I think, in their likeness to the springing of a fountain, remind you of their relation to the desert, and their necessity, therein, to life of man and beast.

24. And thus, associating these grass and lily leaves always with fountains, or with dew, I think we may get a pretty general name for them also. You know that Cora, our Madonna of the flowers, was lost in Sicilian Fields : you know, also, that the fairest of Greek fountains, lost in Greece, was thought to rise in a Sicilian islet ; and that the real springing of the noble fountain in that rock was one of the causes which determined the position of the greatest Greek city of Sicily. So I think, as we call the fairest branched leaves ' Apolline,' we will call the fairest flowing ones ' Arethusan.' But remember that the Apolline leaf represents only the central type of land leaves, and is, within certain limits, of a fixed form ; while the beautiful Arethusan leaves, alike in flowing of their lines, change their forms indefinitely,—some shaped like round pools, and some like winding currents, and many like arrows, and many like hearts, and otherwise varied and variable, as leaves ought to be,—that rise out of the waters, and float amidst the pausing of their foam.

25. Brantwood, *Easter Day*, 1875.—I don't like to spoil my pretty sentence, above ; but on reading it over, I suspect I wrote it confusing the water-lily leaf, and other floating ones of the same kind, with the Arethusan forms. But the water-lily and water-ranunculus leaves, and such others, are to the orders of earth-loving leaves what ducks and swans are to birds ; (the swan is the water-lily of birds ;) they are *swimming* leaves ; not properly watery creatures, or able to live under water like fish, (unless when dormant), but just like

birds that pass their lives on the surface of the waves—though they must breathe in the air.

And these natant leaves, as they lie on the water surface, do not want strong ribs to carry them,* but have very delicate ones beautifully branching into the orbéd space, to keep the tissue nice and flat; while, on the other hand, leaves that really have to grow under water, sacrifice their tissue, and keep only their ribs, like coral animals; ('*Ranunculus heterophyllus*,' 'other-leaved Frog-flower,' and its like,) just as, if you keep your own hands too long in water, they shrivel at the finger-ends.

26. So that you must not attach any great botanical importance to the characters of contrasted aspects in leaves, which I wish you to express by the words 'Apolline' and 'Arethusan'; but their mythic importance is very great, and your careful observance of it will help you completely to understand the beautiful Greek fable of Apollo and Daphne. There are indeed several Daphnes, and the first root of the name is far away in another field of thought altogether, connected with the Gods of Light. But etymology, the best of servants, is an unreasonable master; and Professor Max Müller trusts his deep-reaching knowledge of the first ideas connected with the names of Athena and Daphne, too implicitly, when he supposes this idea to be retained in central Greek theology. 'Athena' originally meant only the dawn, among nations who knew nothing of a Sacred Spirit. But the Athena who catches Achilles by the hair, and urges the spear of Diomed, has not, in the mind of Homer, the slightest remaining connection with the mere beauty of daybreak. Daphne chased by Apollo, may perhaps—though I doubt even this much of consistence in the earlier myth—have meant the Dawn pursued by the Sun. But there is no trace whatever of this first idea left in the fable of Arcadia and Thessaly.

27. The central Greek Daphne is the daughter of one of the great *river* gods of Arcadia; her mother is the Earth.

* "You should see the girders on under-side of the Victoria Water-lily, the most wonderful bit of engineering, of the kind, I know of."—('Botanical friend.')

Now Arcadia is the Oberland of Greece ; and the crests of Cyllene, Drymanthus, and Mænalus* surround it, like the Swiss forest cantons, with walls of rock, and shadows of pine. And it divides itself, like the Oberland, into three regions : first, the region of rock and snow, sacred to Mercury and Apollo, in which Mercury's birth on Cyllene, his construction of the lyre, and his stealing the oxen of Apollo, are all expressions of the enchantments of cloud and sound, mingling with the sunshine, on the cliffs of Cyllene.

“ While the mists
Flying, and rainy vapours, call out shapes
And phantoms from the crags and solid earth
As fast as a musician scatters sounds
Out of his instrument.”

Then came the pine region, sacred especially to Pan and Mænalus the son of Lycaon and brother of Callisto ; and you had better remember this relationship carefully, for the sake of the meaning of the constellations of Ursa Major and the Mons Mænalus, and of their wolf and bear traditions ; (compare also the strong impression on the Greek mind of the wild leafiness, nourished by snow, of the Bœotian Cithæron,—“ Oh, thou lake-hollow, full of divine leaves, and of wild creatures, nurse of the snow, darling of Diana,” (Phœnissæ, 801). How wild the climate of this pine region is, you may judge from the pieces in the note below† out of

* Roughly, Cyllene 7,700 feet high ; Erymanthus 7,000 ; Mænalus 6,000.

† *March 3rd.*—We now ascend the roots of the mountain called Kastaniá, and begin to pass between it and the mountain of Alonístena, which is on our right. The latter is much higher than Kastaniá, and, like the other peaked summits of the Mænalian range, is covered with firs, and deeply at present with snow. The snow lies also in our pass. At a fountain in the road, the small village of Bazeniko is half a mile on the right, standing at the foot of the Mænalian range, and now covered with snow.

Saetá is the most lofty of the range of mountains, which are in face of Levídhí, to the northward and eastward ; they are all a part of the chain which extends from Mount Khelmós, and connects that great summit with Artemisium, Parthenium, and Parnon. Mount Saetá is cov-

Colonel Leake's diary in crossing the Mænalian range in spring. And then, lastly, you have the laurel and vine region, full of sweetness and Elysian beauty.

28. Now as Mercury is the ruling power of the hill enchantment, so Daphne of the leafy peace. She is, in her first life, the daughter of the mountain river, the mist of it filling the valley; the Sun, pursuing, and effacing it, from dell to dell, is, literally, Apollo pursuing Daphne, and *adverse* to her; (not, as in the earlier tradition, the Sun pursuing only his own light). Daphne, thus hunted, cries to her mother, the Earth, which opens, and receives her, causing the laurel to spring up in her stead. That is to say, wherever the rocks protect the mist from the sunbeam, and suffer it to water the earth, there the laurel and other richest vegetation fill the hollows, giving a better glory to the sun itself. For sunshine, on the torrent spray, on the grass of its valley, and entangled among the laurel stems, or glancing from their leaves, became a thousandfold lovelier and more sacred than the same sunbeams, burning on the leafless mountain-side.

And farther, the leaf, in its connection with the river, is typically expressive, not, as the flower was, of human fading and passing away, but of the perpetual flow and renewal of human mind and thought, rising "like the rivers that run among the hills"; therefore it was that the youth of Greece

ered with firs. The mountain between the plain of Levidhi and Alonístena, or, to speak by the ancient nomenclature, that part of the Mænalian range which separates the Orchomenia from the valleys of Helisson and Methydrium, is clothed also with large forests of the same trees; the road across this ridge from Levidhi to Alonístena is now impracticable on account of the snow.

I am detained all day at Levidhi by a heavy fall of snow, which before the evening has covered the ground to half a foot in depth, although the village is not much elevated above the plain, nor in a more lofty situation than Tripolitzá.

March 4th.—Yesterday afternoon and during the night the snow fell in such quantities as to cover all the plains and adjacent mountains; and the country exhibited this morning as fine a snow-scene as Norway could supply. As the day advanced and the sun appeared, the snow melted rapidly, but the sky was soon overcast again, and the snow began to fall.

sacrificed their hair—the sign of their continually renewed strength,—to the rivers, and to Apollo. Therefore, to commemorate Apollo's own chief victory over death—over Python, the corrupter,—a laurel branch was gathered every ninth year in the vale of Tempe ; and the laurel leaf became the reward or crown of all beneficent and enduring work of man—work of inspiration, born of the strength of the earth, and of the dew of heaven, and which can never pass away.

29. You may doubt at first, even because of its grace, this meaning in the fable of Apollo and Daphne ; you will not doubt it, however, when you trace it back to its first eastern origin. When we speak carelessly of the traditions respecting the Garden of Eden, (or in Hebrew, remember, Garden of Delight,) we are apt to confuse Milton's descriptions with those in the book of Genesis. Milton fills his Paradise with flowers ; but no flowers are spoken of in Genesis. We may indeed conclude that in speaking of every herb of the field, flowers are included. But they are not named. The things that are *named* in the Garden of Delight are trees only.

The words are, “every tree that was pleasant to the sight and good for food ;” and as if to mark the idea more strongly for us in the Septuagint, even the ordinary Greek word for tree is not used, but the word ξυλον,—literally, every ‘wood,’ every piece of *timber* that was pleasant or good. They are indeed the “vivi travi,”—living rafters of Dante's Apennine.

Do you remember how those trees were said to be watered ? Not by the four rivers only. The rivers could not supply the place of rain. No rivers do ; for in truth they are the refuse of rain. No storm-clouds were there, nor hidings of the blue by darkening veil ; but there went up a *mist* from the earth, and watered the face of the ground,—or, as in Septuagint and Vulgate, “There went forth a fountain from the earth, and gave the earth to drink.”

30. And now, lastly, we continually think of that Garden of Delight, as if it existed, or could exist, no longer ; wholly forgetting that it is spoken of in Scripture as perpetually existent ; and some of its fairest trees as existent also, or only recently destroyed. When Ezekiel is describing to Pharaoh

the greatness of the Assyrians, do you remember what image he gives of them? "Behold, the Assyrian was a cedar in Lebanon, with fair branches; and his top was among the thick boughs; the waters nourished him, and the deep brought him up, with her rivers running round about his plants. Under his branches did all the beasts of the field bring forth their young; and under his shadow dwelt all great nations."

31. Now hear what follows. "The cedars *in the Garden of God* could not hide *him*. The fir trees were not like his boughs, and the chestnut trees were not like his branches; nor any tree in the Garden of God was like unto him in beauty."

So that you see, whenever a nation rises into consistent, vital, and, through many generations, enduring power, *there* is still the Garden of God; still it is the water of life which feeds the roots of it; and still the succession of its people is imaged by the perennial leafage of trees of Paradise. Could this be said of Assyria, and shall it not be said of England? How much more, of lives such as ours should be,—just, laborious, united in aim, beneficent in fulfilment, may the image be used of the leaves of the trees of Eden! Other symbols have been given often to show the evanescence and slightrness of our lives—the foam upon the water, the grass on the house-top, the vapour that vanishes away; yet none of these are images of true human life. That life, when it is real, is *not* evanescent; is *not* slight; does *not* vanish away. Every noble life leaves the fibre of it interwoven for ever in the work of the world; by so much, evermore, the strength of the human race has gained; more stubborn in the root, higher towards heaven in the branch; and, "as a teil tree, and as an oak,—whose substance is in them when they cast their leaves,—so the holy seed is in the midst thereof."

32. Only remember on what conditions. In the great Psalm of life, we are told that everything that a man doeth shall prosper, so only that he delight in the law of his God, that he hath not walked in the counsel of the wicked, nor sat in the seat of the scornful. Is it among these leaves of the perpetual Spring,—helpful leaves for the healing of the na-

tions,—that we mean to have our part and place, or rather among the “brown skeletons of leaves that lag, the forest brook along”? For other leaves there are, and other streams that water them,—not water of life, but water of Acheron. Autumnal leaves there are that strew the brooks, in Vallombrosa. Remember you how the name of the place was changed: “Once called ‘Sweet water’ (Aqua bella), now, the Shadowy Vale.” Portion in one or other name we must choose, all of us, with the living olive, by the living fountains of waters, or with the wild fig trees, whose leafage of human soul is strewn along the brooks of death, in the eternal Vallombrosa.

CHAPTER IV.

THE FLOWER.

ROME, *Whit Monday*, 1874.

1. On the quiet road leading from under the Palatine to the little church of St. Nereo and Achilleo, I met, yesterday morning, group after group of happy peasants heaped in pyramids on their triumphal carts, in Whit-Sunday dress, stout and clean, and gay in colour; and the women all with bright artificial roses in their hair, set with true natural taste, and well becoming them. This power of arranging wreath or crown of flowers for the head, remains to the people from classic times. And the thing that struck me most in the look of it was not so much the cheerfulness, as the dignity;—in a true sense, the *becomingness* and decorousness of the ornament. Among the ruins of the dead city, and the worse desolation of the work of its modern rebuilders, here was one element at least of honour, and order;—and, in these, of delight.

And these are the real significances of the flower itself. It is the utmost purification of the plant, and the utmost discipline. Where its tissue is blanched fairest, dyed purest, set in strictest rank, appointed to most chosen office, there—and created by the fact of this purity and function—is the flower.

2. But created, observe, by the purity and order, more than by the function. The flower exists for its own sake—not

for the fruit's sake. The production of the fruit is an added honour to it—is a granted consolation to us for its death. But the flower is the end of the seed,—not the seed of the flower. You are fond of cherries, perhaps ; and think that the use of cherry blossom is to produce cherries. Not at all. The use of cherries is to produce cherry blossoms ; just as the use of bulbs is to produce hyacinths,—not of hyacinths to produce bulbs. Nay, that the flower can multiply by bulb, or root, or slip, as well as by seed, may show you at once how immaterial the seed-forming function is to the flower's existence. A flower is to the vegetable substance what a crystal is to the mineral. "Dust of sapphire," writes my friend Dr. John Brown to me, of the wood hyacinths of Scotland in the spring. Yes, that is so,—each bud more beautiful, itself, than perfectest jewel—*this*, indeed, jewel "of purest ray serene ;" but, observe you, the glory is in the purity, the serenity, the radiance,—not in the mere continuance of the creature.

3. It is because of its beauty that its continuance is worth Heaven's while. The glory of it is in being,—not in begetting ; and in the spirit and substance,—not the change. For the earth also has its flesh and spirit. Every day of spring is the earth's Whit Sunday—Fire Sunday. The falling fire of the rainbow, with the order of its zones, and the gladness of its covenant,—you may eat of it, like Esdras ; but you feed upon it only that you may see it. Do you think that flowers were born to nourish the blind ?

Fasten well in your mind, then, the conception of order, and purity, as the essence of the flower's being, no less than of the crystal's. A ruby is not made bright to scatter round it child-rubies ; nor a flower, but in collateral and added honour, to give birth to other flowers.

Two main facts, then, you have to study in every flower : the symmetry or order of it, and the perfection of its substance ; first, the manner in which the leaves are placed for beauty of form ; then the spinning and weaving and blanching of their tissue, for the reception of purest colour, or refining to richest surface.

4. First, the order : the proportion, and answering to each other, of the parts ; for the study of which it becomes necessary to know what its parts are ; and that a flower consists essentially of—Well, I really don't know what it consists essentially of. For some flowers have bracts, and stalks, and toruses, and calices, and corollas, and discs, and stamens, and pistils, and ever so many odds and ends of things besides, of no use at all, seemingly ; and others have no bracts, and no stalks, and no toruses, and no calices, and no corollas, and nothing recognizable for stamens or pistils,—only, when they come to be reduced to this kind of poverty, one doesn't call them flowers ; they get together in knots, and one calls them catkins, or the like, or forgets their existence altogether ;—I haven't the least idea, for instance, myself, what an oak blossom is like ; only I know its bracts get together and make a cup of themselves afterwards, which the Italians call, as they do the dome of St. Peter's, 'cupola' ; and that is a great pity, for their own sake as well as the world's, that they were not content with their ilex cupolas, which were made to hold something, but took to building these big ones upside-down, which hold nothing—less than nothing,—large extinguishers of the flame of Catholic religion. And for farther embarrassment, a flower not only is without essential consistence of a given number of parts, but it rarely consists, alone, of *itself*. One talks of a hyacinth as of a flower ; but a hyacinth is any number of flowers. One does not talk of 'a heather' ; when one says 'heath,' one means the whole plant, not the blossom,—because heath-bells, though they grow together for company's sake, do so in a voluntary sort of way, and are not fixed in their places ; and yet, they depend on each other for effect, as much as a bunch of grapes.

5. And this grouping of flowers, more or less waywardly, is that most subtle part of their order, and the most difficult to represent. Take the cluster of bog-heather bells, for instance, Line-study 1. You might think at first there were no lines in it worth study ; but look at it more carefully. There are twelve bells in the cluster. There may be fewer, or more ; but the bog-heath is apt to run into something near that

number. They all grow together as close as they can, and on one side of the supporting branch only. The natural effect would be to bend the branch down; but the branch won't have that, and so leans back to carry them. Now you see the use of drawing the profile in the middle figure: it shows you the exactly balanced setting of the group,—not drooping, nor erect; but with a disposition to droop, tossed up by the leaning back of the stem. Then, growing as near as they can to each other, those in the middle get squeezed. Here is another quite special character. Some flowers don't like being squeezed at all (fancy a squeezed convolvulus!); but these heather bells like it, and look all the prettier for it,—not the squeezed ones exactly, by themselves, but the cluster altogether, by their patience.

Then also the outside ones get pushed into a sort of star-shape, and in front show the colour of all their sides, and at the back the rich green cluster of sharp leaves that hold them; all this order being as essential to the plant as any of the more formal structures of the bell itself.

6. But the bog-heath has usually only one cluster of flowers to arrange on each branch. Take a spray of ling (*Frontispiece*), and you will find that the richest piece of Gothic spire-sculpture would be dull and graceless beside the grouping of the floral masses in their various life. But it is difficult to give the accuracy of attention necessary to see their beauty without drawing them; and still more difficult to draw them in any approximation to the truth before they change. This is indeed the fatallest obstacle to all good botanical work. Flowers, or leaves,—and especially the last,—can only be rightly drawn as they grow. And even then, in their loveliest spring action, they grow as you draw them, and will not stay quite the same creatures for half an hour.

7. I said in my inaugural lectures at Oxford, § 107, that real botany is not so much the description of plants as their biography. Without entering at all into the history of its fruitage, the life and death of the blossom *itself* is always an eventful romance, which must be completely told, if well. The grouping given to the various states of form between bud

and flower is always the most important part of the design of the plant ; and in the modes of its death are some of the most touching lessons, or symbolisms, connected with its existence. The utter loss and far scattered ruin of the cistus and wild rose,—the dishonoured and dark contortion of the convolvulus,—the pale wasting of the crimson heath of Apennine, are strangely opposed by the quiet closing of the brown bells of the ling, each making of themselves a little cross as they die ; and so enduring into the days of winter. I have drawn the faded beside the full branch, and know not which is the more beautiful.

8. This grouping, then, and way of treating each other in their gathered company, is the first and most subtle condition of form in flowers ; and, observe, I don't mean, just now, the appointed and disciplined grouping, but the wayward and accidental. Don't confuse the beautiful consent of the cluster in these sprays of heath with the legal strictness of a foxglove, —though that also has its divinity ; but of another kind. That legal order of blossoming—for which we may wisely keep the accepted name, 'inflorescence,'—is itself quite a separate subject of study, which we cannot take up until we know the still more strict laws which are set over the flower itself.

9. I have in my hand a small red poppy which I gathered on Whit Sunday on the palace of the Cæsars. It is an intensely simple, intensely floral, flower. All silk and flame : a scarlet cup, perfect-edged all round, seen among the wild grass far away, like a burning coal fallen from Heaven's altars. You cannot have a more complete, a more stainless, type of flower absolute ; inside and outside, *all* flower. No sparing of colour anywhere—no outside coarsenesses—no interior secrecies ; open as the sunshine that creates it ; fine-finished on both sides, down to the extremest point of insertion on its narrow stalk ; and robed in the purple of the Cæsars.

Literally so. That poppy scarlet, so far as it could be painted by mortal hand, for mortal King, stays yet, against the sun, and wind, and rain, on the walls of the house of Augustus, a hundred yards from the spot where I gathered the weed of its desolation.

10. A pure *cup*, you remember it is ; that much at least you cannot but remember, of poppy-form among the corn-fields ; and it is best, in beginning, to think of every flower as essentially a cup. There are flat ones, but you will find that most of these are really groups of flowers, not single blossoms ; and there are out-of-the-way and quaint ones, very difficult to define as of any shape ; but even these have a cup to begin with, deep down in them. You had better take the idea of a cup or vase, as the first, simplest, and most general form of true flower.

The botanists call it a corolla, which means a garland, or a kind of crown ; and the word is a very good one, because it indicates that the flower-cup is made, as our clay cups are, on a potter's wheel ; that it is essentially a *revolute* form—a whirl or (botanically) 'whorl' of leaves ; in reality successive round the base of the urn they form.

11. Perhaps, however, you think poppies in general are not much like cups. But the flower in my hand is a—poverty-stricken poppy, I was going to write,—poverty-strengthened poppy, I mean. On richer ground, it would have gushed into flaunting breadth of untenable purple—flapped its inconsistent scarlet vaguely to the wind—dropped the pride of its petals over my hand in an hour after I gathered it. But this little rough-bred thing, a Campagna pony of a poppy, is as bright and strong to-day as yesterday. So that I can see exactly where the leaves join or lap over each other ; and when I look down into the cup, find it to be composed of four leaves altogether,—two smaller, set within two larger.

12. Thus far (and somewhat farther) I had written in Rome ; but now, putting my work together in Oxford, a sudden doubt troubles me, whether all poppies have two petals smaller than the other two. Whereupon I take down an excellent little school-book on botany—the best I've yet found, thinking to be told quickly ; and I find a great deal about opium ; and, apropos of opium, that the juice of common celandine is of a bright orange colour ; and I pause for a bewildered five minutes, wondering if a celandine is a poppy, and how many petals *it* has : going on again—because I must,

without making up my mind, on either question—I am told to “observe the floral receptacle of the Californian genus *Eschscholtzia*.” Now I can’t observe anything of the sort, and I don’t want to ; and I wish California and all that’s in it were at the deepest bottom of the Pacific. Next I am told to compare the poppy and waterlily ; and I can’t do that, neither—though I should like to ; and there’s the end of the article ; and it never tells me whether one pair of petals is always smaller than the other, or not. Only I see it says the corolla has four petals. Perhaps a celandine may be a double poppy, and have eight, I know they’re tiresome irregular things, and I mustn’t be stopped by them ;*—at any rate, my Roman poppy knew what it was about, and had its two couples of leaves in clear subordination, of which at the time I went on to inquire farther, as follows.

13. The next point is, what shape are the petals of ? And that is easier asked than answered ; for when you pull them

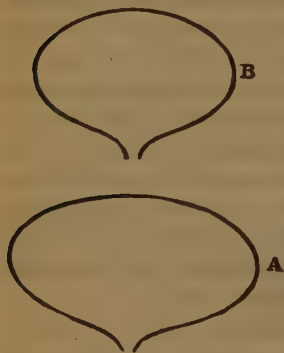


FIG. 4.

off, you find they won’t lie flat, by any means, but are each of them cups, or rather shells, themselves ; and that it requires as much conchology as would describe a cockle, before you can properly give account of a single poppy leaf. Or of a single *any* leaf—for all leaves are either shells, or boats, (or solid, if not hollow, masses,) and cannot be represented in flat outline. But, laying these as flat as they will lie on a sheet of paper, you will find the piece they hide of the paper they lie

on can be drawn ; giving approximately the shape of the outer leaf as at A, that of the inner as at B, Fig. 4 ; which you will

* Just in time, finding a heap of gold under an oak tree some thousand years old, near Arundel, I’ve made them out : Eight divided by three ; that is to say, three couples of petals, with two odd little ones inserted for form’s sake. No wonder I couldn’t decipher them by memory.

find very difficult lines to draw, for they are each composed of two curves, joined, as in Fig. 5 ; all above the line *a b* being the outer edge of the leaf, but joined so subtly to the side that the least break in drawing the line spoils the form.

14. Now every flower petal consists essentially of these two parts, variously proportioned and outlined. It expands from *C* to *a b* ; and closes in the external line, and for this reason.

Considering every flower under the type of a cup, the first part of the petal is that in which it expands from the bottom to the rim ; the second part, that in which it terminates itself on reaching the rim. Thus let the three circles, *A B C*, Fig.

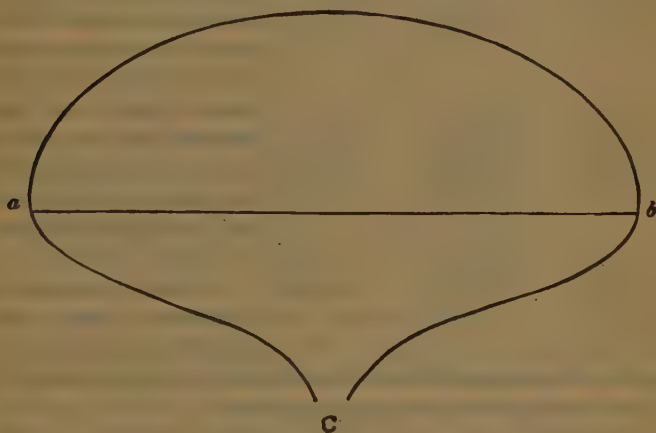


FIG. 5.

6., represent the undivided cups of the three great geometrical orders of flowers—trefoil, quatrefoil and cinquefoil.

Draw in the first an equilateral triangle, in the second a square, in the third a pentagon ; draw the dark lines from centres to angles ; (*D E F*) : then (*a*) the third part of *D* ; (*b*) the fourth part of *E*, (*c*) the fifth part of *F*, are the normal outline forms of the petals of the three families ; the relations between the developing angle and limiting curve being varied according to the depth of cup, and the degree of connection between the petals. Thus a rose folds them over one another,

in the bud; a convolvulus twists them,—the one expanding into a flat cinquefoil of separate petals, and the other into a deep-welled cinquefoil of connected ones.

I find an excellent illustration in *Veronica Polita*, one of the most perfectly graceful of field plants because of the light alternate flower stalks, each with its leaf at the base; the flower itself a quatrefoil, of which the largest and least petals are uppermost. Pull one off its calyx (draw, if you can, the outline of the striped blue upper petal with the jagged edge

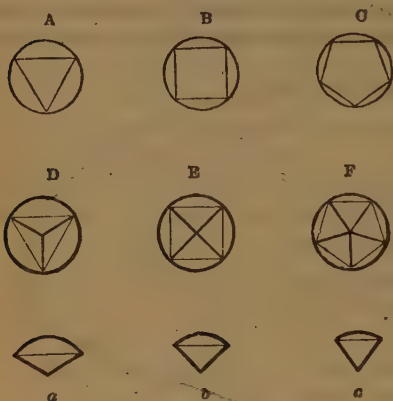


FIG. 6.

of pale gold below), and then examine the relative shapes of the lateral, and least upper petal. Their under surface is very curious, as if covered with white paint; the blue stripes above, in the direction of their growth, deepening the more delicate colour with exquisite insistence.

A lilac blossom will give you a pretty example of the expansion of the

petals of a quatrefoil above the edge of the cup or tube; but I must get back to our poppy at present.

15. What outline its petals really have, however, is little shown in their crumpled fluttering; but that very crumpling arises from a fine floral character which we do not enough value in them. We usually think of the poppy as a coarse flower; but it is the most transparent and delicate of all the blossoms of the field. The rest—nearly all of them—depend on the *texture* of their surfaces for colour. But the poppy is painted *glass*; it never glows so brightly as when the sun shines through it. Wherever it is seen—against the light or with the light—always, it is a flame, and warms the wind like a blown ruby.

In these two qualities, the accurately balanced form, and

the perfectly infused colour of the petals, you have, as I said, the central being of the flower. All the other parts of it are necessary, but we must follow them out in order.

16. Looking down into the cup, you see the green boss divided by a black star,—of six rays only,—and surrounded by a few black spots. My rough-nurtured poppy contents itself with these for its centre ; a rich one would have had the green boss divided by a dozen of rays, and surrounded by a dark crowd of crested threads.

This green boss is called by botanists the pistil, which word consists of the two first syllables of the Latin pistillum, otherwise more familiarly Englished into ‘pestle.’ The meaning of the botanical word is of course, also, that the central part of a flower-cup has to it something of the relations that a pestle has to a mortar ! Practically, however, as this pestle has no pounding functions, I think the word is misleading as well as ungraceful ; and that we may find a better one after looking a little closer into the matter. For this pestle is divided generally into three very distinct parts : there is a storehouse at the bottom of it for the seeds of the plant ; above this, a shaft, often of considerable length in deep cups, rising to the level of their upper edge, or above it ; and at the top of these shafts an expanded crest. This shaft the botanists call ‘style,’ from the Greek word for a pillar ; and the crest of it—I do not know why—stigma, from the Greek word for ‘spot.’ The storehouse for the seeds they call the ‘ovary,’ from the Latin ovum, an egg. So you have two-thirds of a Latin word, (pistil)—awkwardly and disagreeably edged in between pestle and pistol—for the whole thing ; you have an English-Latin word (ovary) for the bottom of it ; an English-Greek word (style) for the middle ; and a pure Greek word (stigma) for the top.

17. This is a great mess of language, and all the worse that the word style and stigma have both of them quite different senses in ordinary and scholarly English from this forced botanical one. And I will venture therefore, for my own pupils, to put the four names altogether into English. Instead of calling the whole thing a pistil, I shall simply call

it the pillar. Instead of 'ovary,' I shall say 'Treasury' (for a seed isn't an egg, but it *is* a treasure). The style I shall call the 'Shaft,' and the stigma the 'Volute.' So you will have your entire pillar divided into the treasury, at its base, the shaft, and the volute; and I think you will find these divisions easily remembered, and not unfitted to the sense of the words in their ordinary use.

18. Round this central, but, in the poppy, very stumpy, pillar, you find a cluster of dark threads, with dusty pendants or cups at their ends. For these the botanists name 'stamens,' may be conveniently retained, each consisting of a 'filament,' or thread, and an 'anther,' or blossoming part.

And in this rich corolla, and pillar, or pillars, with their treasuries, and surrounding crowd of stamens, the essential flower consists. Fewer than these several parts, it cannot have, to be a flower at all; of these, the corolla leads, and is the object of final purpose. The stamens and the treasuries are only there in order to produce future corollas, though often themselves decorative in the highest degree.

These, I repeat, are all the essential parts of a flower. But it would have been difficult, with any other than the poppy, to have shown you them alone; for nearly all other flowers keep with them, all their lives, their nurse or tutor leaves,—the group which, in stronger and humbler temper, protected them in their first weakness, and formed them to the first laws of their being. But the poppy casts these tutorial leaves away. It is the finished picture of impatient and luxury-loving youth,—at first too severely restrained, then casting all restraint away,—yet retaining to the end of life unseemly and illiberal signs of its once compelled submission to laws which were only pain,—not instruction.

19. Gather a green poppy bud, just when it shows the scarlet line at its side; break it open and unpack the poppy. The whole flower is there complete in size and colour,—its stamens full-grown, but all packed so closely that the fine silk of the petals is crushed into a million of shapeless wrinkles. When the flower opens, it seems a deliverance from torture; the two imprisoning green leaves are shaken to the ground;

the aggrieved corolla smooths itself in the sun, and comforts itself as it can ; but remains visibly crushed and hurt to the end of its days.

20. Not so flowers of gracious breeding. Look at these four stages in the young life of a primrose, Fig. 7. First confined, as strictly as the poppy within five pinching green leaves, whose points close over it, the little thing is content to remain a child, and finds its nursery large enough. The green leaves uncloseth their points,—the little yellow ones peep out, like ducklings. They find the light delicious, and

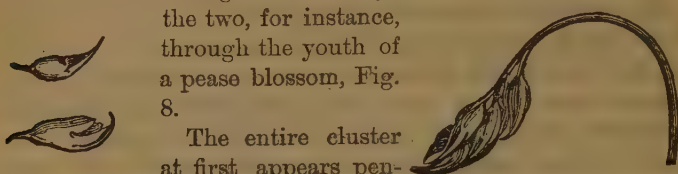


FIG. 7.

open wide to it ; and grow, and grow, and throw themselves wider at last into their perfect rose. But they never leave their old nursery for all that ; it and they live on together ; and the nursery seems a part of the flower.

21. Which is so, indeed, in all the loveliest flowers ; and, in usual botanical parlance, a flower is said to consist of its calyx, (or *hiding* part—Calypso having rule over it,) and corolla, or garland part, Proserpina having rule over it. But it is better to think of them always as separate ; for this calyx, very justly so named from its main function of concealing the flower, in its youth is usually green, not coloured, and

shows its separate nature by pausing, or at least greatly lingering, in its growth, and modifying itself very slightly, while the corolla is forming itself through active change. Look at



the two, for instance, through the youth of a pease blossom, Fig. 8.

The entire cluster at first appears pendent in this manner, the stalk bending round on purpose to put it into that position. On which all the little buds, thinking themselves ill-treated, determine not to submit to anything of the sort, turn their points upward persistently, and determine that—at any cost of trouble—they will get nearer the sun. Then they begin to open, and let out their corollas. I give the process of one only (Fig. 9).*



FIG. 9.

At first, you see the long lower point of the calyx thought that *it* was going to be the head of the family, and curls upwards eagerly. Then the little corolla steals out; and soon does away with that impression on the mind of the calyx. The corolla soars up with widening wings, the abashed calyx retreats beneath; and finally the great upper leaf of corolla—not pleased at having its back still turned to the light, and its face down—throws itself entirely back, to look at the sky, and nothing else;—and your blossom is complete.

Keeping, therefore, the ideas of calyx and corolla entirely

* Figs. 8 and 9 are both drawn and engraved by Mr. Burgess.

distinct, this one general point you may note of both ; that, as a calyx is originally folded tight over the flower, and has to open deeply to let it out, it is nearly always composed of sharp pointed leaves like the segments of a balloon ; while corollas having to open out as wide as possible to show themselves, are typically like cups or plates, only cut into their edges here and there, for ornamentation's sake.

22. And, finally, though the corolla is essentially the floral group of leaves, and usually receives the glory of colour for itself only, this glory and delight may be given to any other part of the group ; and, as if to show us that there is no really dishonoured or degraded membership, the stalks and leaves in some plants, near the blossom, flush in sympathy with it, and become themselves a part of the effectively visible flower ; —Eryngo—Jura hyacinth, (comosus,) and the edges of upper stems and leaves in many plants ; while others, (Geranium lucidum,) are made to delight us with their leaves rather than their blossoms ; only I suppose, in these, the scarlet leaf colour is a kind of early autumnal glow,—a beautiful hectic, and fore-taste, in sacred youth, of sacred death.

I observe, among the speculations of modern science, several, lately, not uningenious, and highly industrious, on the subject of the relation of colour in flowers, to insects—to selective development, etc., etc. There *are* such relations, of course. So also, the blush of a girl, when she first perceives the faltering in her lover's step as he draws near, is related essentially to the existing state of her stomach ; and to the state of it through all the years of her previous existence. Nevertheless, neither love, chastity, nor blushing, are merely exponents of digestion.

All these materialisms, in their unclean stupidity, are essentially the work of human bats ; men of semi-faculty or semi-education, who are more or less incapable of so much as seeing, much less thinking about, colour ; among whom, for one-sided intensity, even Mr. Darwin must be often ranked, as in his vespertilian treatise on the ocelli of the Argus pheasant, which he imagines to be artistically gradated, and perfectly imitative of a ball and socket. If I had him here in Oxford

for a week, and could force him to try to copy a feather by Bewick, or to draw for himself a boy's thumb'd marble, his notions of feathers, and balls, would be changed for all the rest of his life. But his ignorance of good art is no excuse for the acutely illogical simplicity of the rest of his talk of colour in the "Descent of Man." Peacocks' tails, he thinks, are the result of the admiration of blue tails in the minds of well-bred peahens,—and similarly, mandrills' noses the result of the admiration of blue noses in well-bred baboons. But it never occurs to him to ask why the admiration of blue noses is healthy in baboons, so that it develops their race properly, while similar maidenly admiration either of blue noses or red noses in men would be improper, and develop the race improperly. The word itself 'proper' being one of which he has never asked, or guessed, the meaning. And when he imagined the gradation of the cloudings in feathers to represent successive generation, it never occurred to him to look at the much finer cloudy gradations in the clouds of dawn themselves; and explain the modes of sexual preference and selective development which had brought *them* to their scarlet glory, before the cock could crow thrice. Putting all these vespertilian speculations out of our way, the human facts concerning colour are briefly these. Wherever men are noble, they love bright colour; and wherever they can live healthily, bright colour is given them—in sky, sea, flowers, and living creatures.

On the other hand, wherever men are ignoble and sensual, they endure without pain, and at last even come to like (especially if artists,) mud-colour and black, and to dislike rose-colour and white. And wherever it is unhealthy for them to live, the poisonousness of the place is marked by some ghastly colour in air, earth or flowers.

There are, of course, exceptions to all such widely founded laws; there are poisonous berries of scarlet, and pestilent skies that are fair. But, if we once honestly compare a venomous wood-fungus, rotting into black dissolution of dripped slime at its edges, with a spring gentian; or a puff adder with a salmon trout, or a fog in Bermondsey with a clear sky at Berne, we shall get hold of the entire question on its right

side ; and be able afterwards to study at our leisure, or accept without doubt or trouble, facts of apparently contrary meaning. And the practical lesson which I wish to leave with the reader is, that lovely flowers, and green trees growing in the open air, are the proper guides of men to the places which their maker intended them to inhabit ; while the flowerless and treeless deserts—of reed, or sand, or rock,—are meant to be either heroically invaded and redeemed, or surrendered to the wild creatures which are appointed for them ; happy and wonderful in their wild abodes.

Nor is the world so small but that we may yet leave in it also unconquered spaces of beautiful solitude ; where the chamois and red deer may wander fearless,—nor any fire of avarice scorch from the Highlands of Alp, or Grampian, the rapture of the heath, and the rose.

CHAPTER V.

PAPAVER RHOEAS.

BRANTWOOD, *July 11th, 1875.*

1. CHANGING to take up yesterday a favourite old book, Mavor's *British Tourists*, (London, 1798,) I found in its fourth volume a delightful diary of a journey made in 1782 through various parts of England, by Charles P. Moritz of Berlin.

And in the fourteenth page of this diary I find the following passage, pleasantly complimentary to England :—

“The slices of bread and butter which they give you with your tea are as thin as poppy leaves. But there is another kind of bread and butter usually eaten with tea, which is toasted by the fire, and is incomparably good. This is called ‘toast.’”

I wonder how many people, nowadays, whose bread and butter was cut too thin for them, would think of comparing the slices to poppy leaves? But this was in the old days of travelling, when people did not whirl themselves past corn-fields, that they might have more time to walk on paving-

stones; and understood that poppies did not mingle their scarlet among the gold, without some purpose of the poppy-Maker that they should be looked at.

Nevertheless, with respect to the good and polite German's poetically-contemplated, and finely æsthetic, tea, may it not be asked whether poppy leaves themselves, like the bread and butter, are not, if we may venture an opinion—*too* thin,—*improperly* thin? In the last chapter, my reader was, I hope, a little anxious to know what I meant by saying that modern philosophers did not know the meaning of the word 'proper,' and may wish to know what I mean by it myself. And this I think it needful to explain before going farther.

2. In our English prayer-book translation, the first verse of the ninety-third Psalm runs thus: "The Lord is King; and hath put on glorious apparel." And although, in the future republican world, there are to be no lords, no kings, and no glorious apparel, it will be found convenient, for botanical purposes, to remember what such things once were; for when I said of the poppy, in last chapter, that it was "robed in the purple of the Cæsars," the words gave, to any one who had a clear idea of a Cæsar, and of his dress, a better, and even *stricter*, account of the flower than if I had only said, with Mr. Sowerby, "petals bright scarlet;" which might just as well have been said of a pimpernel, or scarlet geranium;—but of neither of these latter should I have said "robed in purple of Cæsars." What I meant was, first, that the poppy leaf looks dyed through and through, like glass, or Tyrian tissue; and not merely painted: secondly, that the splendour of it is proud,—almost insolently so. Augustus, in his glory, might have been clothed like one of these; and Saul; but not David nor Solomon; still less the teacher of Solomon, when He puts on 'glorious apparel.'

3. Let us look, however, at the two translations of the same verse.

In the vulgate it is "Dominus regnavit; decorem indutus est;" He has put on 'becomingness,'—decent apparel, rather than glorious.

In the Septuagint it is *ευπρεπεία*—*well-becomingness*; an ex

pression which, if the reader considers, must imply certainly the existence of an opposite idea of possible 'ill-becomingness,'—of an apparel which should, in just as accurate a sense, belong appropriately to the creature invested with it, and yet not be glorious, but inglorious, and not well-becoming, but ill-becoming. The mandrill's blue nose, for instance, already referred to, can we rightly speak of this as 'ευπρεπειὰ'? Or the stings, and minute, colourless blossoming of the nettle? May we call these a glorious apparel, as we may the glowing of an alpine rose?

You will find on reflection, and find more convincingly the more accurately you reflect, that there is an absolute sense attached to such words as 'decent,' 'honourable,' 'glorious,' or 'καλος,' contrary to another absolute sense in the words 'indecent,' 'shameful,' 'vile,' or 'αισχυρος.'

And that there is every degree of these absolute qualities visible in living creatures; and that the divinity of the Mind of man is in its essential discernment of what is καλον from what is αισχυρον, and in his preference of the kind of creatures which are decent, to those which are indecent; and of the kinds of thoughts, in himself, which are noble, to those which are vile.

4. When therefore I said that Mr. Darwin, and his school,* had no conception of the real meaning of the word 'proper,' I meant that they conceived the qualities of things only as their 'properties,' but not as their 'becomingnesses;' and seeing that dirt is proper to a swine, malice to a monkey, poison to a nettle, and folly to a fool, they called a nettle *but* a nettle, and the faults of fools *but* folly; and never saw the difference between ugliness and beauty absolute, decency and indecency absolute, glory or shame absolute, and folly or sense absolute.

Whereas, the perception of beauty, and the power of defining physical character, are based on moral instinct, and on the power of defining animal or human character. Nor is it possible to say that one flower is more highly developed, or one animal of a higher order, than another, without the assump-

* Of Vespertilian science generally, compare 'Eagles' Nest,' pp. 23 and 126.

tion of a divine law of perfection to which the one more conforms than the other.

5. Thus, for instance. That it should ever have been an

open question with me whether a poppy had always two of its petals less than the other two, depended wholly on the hurry and imperfection with which the poppy carries out its plan.

It never would have occurred to me to doubt whether an iris had three of its leaves smaller than the other three, because an iris always completes itself to its own ideal.

Nevertheless, on examining various poppies, as I walked, this summer, up and down the hills between Sheffield and Wakefield, I find the subordination of the upper and lower petals entirely necessary and normal; and



FIG. 10.

that the result of it is to give two distinct profiles to the poppy cup, the difference between which, however, we shall see better in the yellow Welsh poppy, at present called *Meconopsis Cambrica*; but which, in the Oxford schools,

will be 'Papaver cruciforme'—'Crosslet Poppy,'—first, because all our botanical names must be in Latin if possible; Greek only allowed when we can do no better; secondly, because meconopsis is barbarous Greek; thirdly, and chiefly, because it is little matter whether this poppy be Welsh or English; but very needful that we should observe, wherever it grows, that the petals are arranged in what used to be, in my young days, called a diamond shape,* as at A, Fig. 10, the two narrow inner ones at right angles to, and projecting farther than, the two outside broad ones; and that the two broad ones, when the flower is seen in profile, as at B, show their margins folded back, as indicated by the thicker lines, and have a profile curve, which is only the softening, or melting away into each other, of two straight lines. Indeed, when the flower is younger, and quite strong, both its profiles, A and B, Fig. 11, are nearly straight-sided; and always, be it young or old, one broader than the other, so as to give the flower, seen from above, the shape of a contracted cross, or crosslet.

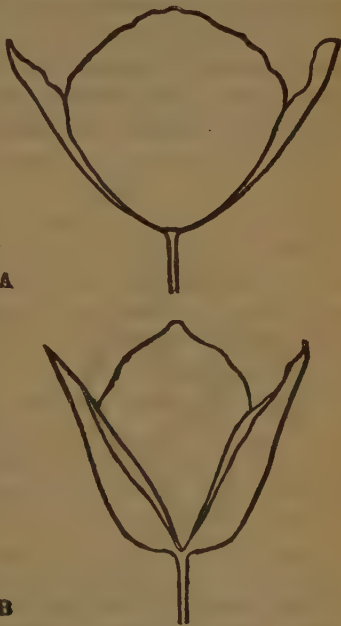


FIG. 11.

6. Now I find no notice of this flower in Gerarde; and in Sowerby, out of eighteen lines of closely printed descriptive text, no notice of its crosslet form, while the petals are only stated to be "roundish-concave," terms equally applicable to at least one-half of all flower petals in the world. The leaves

* The mathematical term is 'rhomb.'

are *said* to be very deeply pinnately partite ; but *drawn*—as neither pinnate nor partite !

And this is your modern cheap science, in ten volumes. Now I haven't a quiet moment to spare for drawing this morning ; but I merely give the main relations of the petals, A, and blot in the wrinkles of one of the lower ones, B, Fig. 12 ; and yet in this rude sketch you will feel, I believe, there is something specific which could not belong to any other flower. But all proper description is impossible without careful profiles of each petal laterally and across it. Which I may not find time to draw for any poppy whatever, because they none



FIG. 12.

of them have well-becomingness enough to make it worth my while, being all more or less weedy, and ungracious, and mingled of good and evil. Whereupon rises before me, ghostly and untenable, the general question, ‘What is a weed ?’ and, impatient for answer, the particular question, What is a poppy ? I choose, for instance, to call this yellow flower a poppy, instead of a “likeness to poppy,” which the botanists meant to call it, in their bad Greek. I choose also to call a poppy, what the botanists have called “glaucous thing,” (*glaucium*). But where and when shall I stop calling things poppies ? This is certainly a question to be settled at once, with others appertaining to it.

7. In the first place, then, I mean to call every flower either one thing or another, and not an 'aceous' thing, only half something or half another. I mean to call this plant now in my hand, either a poppy or not a poppy ; but not poppaceous. And this other, either a thistle or not a thistle ; but not thistlaceous. And this other, either a nettle or not a nettle ; but not nettlaceous. I know it will be very difficult to carry out this principle when tribes of plants are much extended and varied in type : I shall persist in it, however, as far as possible ; and when plants change so much that one cannot with any conscience call them by their family name any more, I shall put them aside somewhere among families of poor relations, not to be minded for the present, until we are well acquainted with the better bred circles. I don't know, for instance, whether I shall call the Burnet 'Grass-rose,' or put it out of court for having no petals ; but it certainly shall not be called rosaceous ; and my first point will be to make sure of my pupils having a clear idea of the central and unquestionable forms of thistle, grass, or rose, and assigning to them pure Latin, and pretty English, names,—classical, if possible ? and at least intelligible and decorous.

8. I return to our present special question, then, What is a poppy ? and return also to a book I gave away long ago, and have just begged back again, Dr. Lindley's *Ladies' Botany*. For without at all looking upon ladies as inferior beings, I dimly hope that what Dr. Lindley considers likely to be intelligible to *them*, may be also clear to their very humble servant.

The poppies, I find, (page 19, vol. i.) differ from crowfeet in being of a stupefying instead of a burning nature, and in generally having two sepals, and twice two petals, "but as some poppies have three sepals, and twice three petals, the number of these parts is not sufficiently constant to form an essential mark." Yes, I know that, for I found a superb six-petaled poppy, spotted like a cistus, the other day in a friend's garden. But then, what makes it a poppy still ? That it is of a stupefying nature, and itself so stupid that it does not know how many petals it should have, is surely not enough distinction ?

9. Returning to Lindley, and working the matter farther out with his help, I think this definition might stand : "A poppy is a flower which has either four or six petals, and two or more treasuries, united into one ; containing a milky, stupefying fluid in its stalks and leaves, and always throwing away its calyx when it blossoms."

And indeed, every flower which unites all these characters, we shall, in the Oxford schools, call 'poppy,' and 'Papaver ;' but when I get fairly into work, I hope to fix my definitions into more strict terms. For I wish all my pupils to form the habit of asking, of every plant, these following four questions, in order, corresponding to the subject of these opening chapters, namely, "What root has it? what leaf? what flower? and what stem?" And, in this definition of poppies, nothing whatever is said about the root ; and not only I don't know myself what a poppy root is like, but in all Sowerby's poppy section, I find no word whatever about that matter.

10. Leaving, however, for the present, the root unthought of, and contenting myself with Dr. Lindley's characteristics, I shall place, at the head of the whole group, our common European wild poppy, *Papaver Rhoeas*, and, with this, arrange the nine following other flowers thus,—opposite.

I must be content at present with determining the Latin names for the Oxford schools ; the English ones I shall give as they chance to occur to me, in Gerard and the classical poets who wrote before the English revolution. When no satisfactory name is to be found, I must try to invent one ; as, for instance, just now, I don't like Gerard's 'Corn-rose' for *Papaver Rhoeas*, and must coin another ; but this can't be done by thinking : it will come into my head some day, by chance. I might try at it straightforwardly for a week together, and not do it.

The Latin names must be fixed at once, somehow ; and therefore I do the best I can, keeping as much respect for the old nomenclature as possible, though this involves the illogical practice of giving the epithet sometimes from the flower, (*violaceum*, *cruciforme*), and sometimes from the seed vessel, (*elatum*, *echinosum*, *corniculatum*). Guarding this distinc-

tion, however, we may perhaps be content to call the six last of the group, in English, Urchin Poppy, Violet Poppy, Crosslet Poppy, Horned Poppy, Beach Poppy, and Welcome Poppy. I don't think the last flower pretty enough to be connected more directly with the swallow, in its English name.

NAME IN OXFORD CATALOGUE.	DIOSCORIDES.	IN PRESENT BOTANY.
1. Papaver Rhoëas	μητρων ροιας...	Papaver Rhoëas
2. P. Hortense	μ. κηπευτη *	P. Hortense
3. P. Elatum	μ. θυλακίτις †.	P. Lamottei
4. P. Argemone .....	.....	P. Argemone
5. P. Echinopsium .....	.....	P. Hybridum
6. P. Violaceum .....	.....	Roemeria Hybrida
7. P. Cruciforme .....	.....	Mecconopsis Cambrica
8. P. Corniculatum	μ. κερατίτις...	Glaucium Corniculatum
9. P. Littorale	μ. παραλιος...	Glaucium Luteum
10. P. Chelidonium .....	.....	Chelidonium Majus

11. I shall be well content if my pupils know these ten poppies rightly ; all of them at present wild in our own country, and, I believe, also European in range : the head and type of all being the common wild poppy of our cornfields for which the name ' Papaver Rhoëas,' given it by Dioscorides, Gerarde, and Linnæus, is entirely authoritative, and we will therefore at once examine the meaning, and reason, of that name.

12. Dioscorides says the name belongs to it " διὰ τὸ ταχέως τὸ ἄνθος ἀποβάλλειν," " because it casts off its bloom quickly," from ῥέω, (rheo) in the sense of shedding.† And this indeed it does,—first calyx, then corolla ;—you may translate it ' swiftly ruinous ' poppy, but notice, in connection with this idea, how it droops its head *before* blooming : an action which I doubt not, mingled in Homer's thought with the image of its depression when filled by rain, in the passage of the Iliad,

* ἥς τὸ σπέρμα ἀρτοποιεῖται.

† ἐπίμηκες ἔχουσα τὸ κεφάλιον. Dioscorides makes no effort to distinguish species, but gives the different names as if merely used in different places

‡ It is also used sometimes of the garden poppy, says Dioscorides, " διὰ τὸ ῥεῖν ἐξ αὐτῆς τὸν ὄπον"—" because the sap, opium, flows from it."

which, as I have relieved your memory of three unnecessary names of poppy families, you have memory to spare for learning.

“μήκων δ' ὧς ἐτέρωσε κάρη βάλεν, ἥτ' ἐν κήπῳ
καρπῷ βριθομένη, νατιῇσι τε εἰδρινῇτιν
ὧς ἐτέρωσ' ἤμυσσε κάρη πῆληκι βαρυνθέν.”

“And as a poppy lets its head fall aside, which in a garden is loaded with its fruit, and with the soft rains of spring, so the youth drooped his head on one side ; burdened with the helmet.”

And now you shall compare the translations of this passage, with its context, by Chapman and Pope—(or the school of Pope), the one being by a man of pure English temper, and able therefore to understand pure Greek temper ; the other infected with all the faults of the falsely classical school of the Renaissance.

First I take Chapman :—

“His shaft smit fair Gorgythion, of Praim's princely race
Who in Æpina was brought forth, a famous town in Thrace,
By Castianeira, that for form was like celestial breed.
And as a crimson poppy-flower, surcharged with his seed,
And vernal humours falling thick, declines his heavy brow,
So, a-oneside, his helmet's weight his fainting head did bow.”

Next, Pope :—

“He missed the mark ; but pierced Gorgythio's heart,
And drenched in royal blood the thirsty dart :
(Fair Castianeira, nymph of form divine,
This offspring added to King Priam's line).
As full-blown poppies, overcharged with rain,
Decline the head, and drooping kiss the plain,
So sinks the youth : his beauteous head, depressed
Beneath his helmet, drops upon his breast.”

13. I give you the two passages in full, trusting that you may so feel the becomingness of the one, and the gracelessness of the other. But note farther, in the Homeric passage, one subtlety which cannot enough be marked even in Chapman's English, that his second word, ἤμυσσε, is employed by

him both of the stooping of ears of corn, under wind, and of Troy stooping to its ruin ;* and otherwise, in good Greek writers, the word is marked as having such specific sense of men's drooping under weight ; or towards death, under the burden of fortune which they have no more strength to sustain ; † compare the passage I quoted from Plato, (' Crown of

* See all the passages quoted by Liddell.

† I find this chapter rather tiresome on re-reading it myself, and cancel some farther criticism of the imitation of this passage by Virgil, one of the few pieces of the *Æneid* which are purely and vulgarly imitative, rendered also false as well as weak by the introducing sentence, "*Volvitur Euryalus leto*," after which the simile of the drooping flower is absurd. Of criticism, the chief use of which is to warn all sensible men from such business, the following abstract of Diderot's notes on the passage, given in the '*Saturday Review*' for April 29th, 1871, is worth preserving. (Was the French critic really not aware that Homer *had* written the lines his own way ?)

"Diderot illustrates his theory of poetical hieroglyphs by no quotations, but we can show the manner of his minute and sometimes fanciful criticism by repeating his analysis of the passage of Virgil wherein the death of Euryalus is described :

'Pulchrosque per artus
It cruor, inque humeros cervix collapsa recumbit ;
Purpureus veluti cum flos succisus aratro
Languescit moriens ; lassove papavera collo
Demisere caput, pluvia cum forte gravantur.'

"The sound of '*It cruor*,' according to Diderot, suggests the image of a jet of blood ; '*cervix collapsa recumbit*,' the fall of a dying man's head upon his shoulder ; '*succisus*' imitates the use of a cutting scythe (not plough) ; '*demisere*' is as soft as the eye of a flower ; '*gravantur*,' on the other hand, has all the weight of a calyx, filled with rain ; '*collapsa*' marks an effort and a fall, and similar double duty is performed by '*papavera*,' the first two syllables symbolizing the poppy upright, the last two the poppy bent. While thus pursuing his minute investigations, Diderot can scarcely help laughing at himself, and candidly owns that he is open to the suspicion of discovering in the poem beauties which have no existence. He therefore qualifies his eulogy by pointing out two faults in the passage. '*Gravantur*,' notwithstanding the praise it has received, is a little too heavy for the light head of a poppy, even when filled with water. As for '*aratro*,' coming as it does after the hiss of '*succisus*,' it is altogether abominable. Had Homer written the lines,

Wild Olive,' p. 95): "And bore lightly the burden of gold and of possessions." And thus you will begin to understand how the poppy became in the heathen mind the type at once of power, or pride, and of its loss; and therefore, both why Virgil represents the white nymph Nais, "*pallentes violas, et summa papavera carpens*,"—gathering the pale flags, and the highest poppies,—and the reason for the choice of this rather than any other flower, in the story of Tarquin's message to his son.

14. But you are next to remember the word *Rhoeas* in another sense. Whether originally intended or afterwards caught at, the resemblance of the word to '*Rhoea*,' a pomegranate, mentally connects itself with the resemblance of the poppy head to the pomegranate fruit.

And if I allow this flower to be the first we take up for careful study in '*Proserpina*,' on account of its simplicity of form and splendour of colour, I wish you also to remember, in connection with it, the cause of Proserpine's eternal captivity—her having tasted a pomegranate seed,—the pomegranate being in Greek mythology what the apple is in the Mosaic legend; and, in the whole worship of Demeter, associated with the poppy by a multitude of ideas which are not definitely expressed, but can only be gathered out of Greek art and literature, as we learn their symbolism. The chief character on which these thoughts are founded is the fulness of seed in the poppy and pomegranate, as an image of life: then the forms of both became adopted for beads or bosses in ornamental art; the pomegranate remains more distinctly a Jewish and Christian type, from its use in the border of Aaron's robe, down to the fruit in the hand of Angelico's and Botticelli's Infant Christs; while the poppy is gradually confused by the Byzantine Greeks with grapes; and both of these with

he would have ended with some hieroglyph, which would have continued the hiss or described the fall of a flower. To the hiss of '*succisus*' Diderot is warmly attached. Not by mistake, but in order to justify the sound, he ventures to translate '*aratrum*' into '*scythe*,' boldly and rightly declaring in a marginal note that this is not the meaning of the word."

palm fruit. The palm, in the shorthand of their art, gradually becomes a symmetrical branched ornament with two pendent bosses; this is again confused with the Greek iris, (Homer's blue iris, and Pindar's water-flag,)—and the Florentines, in adopting Byzantine ornament, read it into their own Fleur-de-lys; but insert two poppyheads on each side of the entire foil, in their finest heraldry.

15. Meantime the definitely intended poppy, in late Christian Greek art of the twelfth century, modifies the form of the Acanthus leaf with its own, until the northern twelfth-century workman takes the thistle-head for the poppy, and the thistle-leaf for acanthus. The true poppy-head remains in the south, but gets more and more confused with grapes, till the Renaissance carvers are content with any kind of boss full of seed, but insist on such boss or bursting globe as some essential part of their ornament;—the bean-pod for the same reason (not without Pythagorean notions, and some of republican election) is used by Brunelleschi for main decoration of the lantern of Florence duomo; and, finally, the ornamentation gets so shapeless, that M. Violet-le-Duc, in his 'Dictionary of Ornament,' loses trace of its origin altogether, and fancies the later forms were derived from the spadix of the arum.

16. I have no time to enter into farther details; but through all this vast range of art, note this singular fact, that the wheat ear, the vine, the fleur-de-lys, the poppy, and the jagged leaf of the acanthus-weed, or thistle, occupy the entire thoughts of the decorative workmen trained in classic schools, to the exclusion of the rose, true lily, and other the flowers of luxury. And that the deeply underlying reason of this is in the relation of weeds to corn, or of the adverse powers of nature to the beneficent ones, expressed for us readers of the Jewish scriptures, centrally in the verse, "thorns also, and thistles, shall it bring forth to thee; and thou shalt eat the herb of the field" (*χορτος*, grass or corn), and exquisitely symbolized throughout the fields of Europe by the presence of the purple 'corn-flag,' or gladiolus, and 'corn-rose' (Gerarde's name for *Papaver Rhoeas*), in the midst of carelessly tended corn; and in the traditions of the art of Europe by

the springing of the Acanthus round the basket of the canephora, strictly the basket *for bread*, the idea of bread including all sacred things carried at the feasts of Demeter, Bacchus, and the Queen of the Air. And this springing of the thorny weeds round the basket of reed, distinctly taken up by the Byzantine Italians in the basket-work capital of the twelfth century, (which I have already illustrated at length in the 'Stones of Venice,') becomes the germ of all capitals whatsoever, in the great schools of Gothic, to the end of Gothic time, and also of all the capitals of the pure and noble Renaissance architecture of Angelico and Perugino, and all that was learned from them in the north, while the introduction of the rose, as a primal element of decoration, only takes place when the luxury of English decorated Gothic, the result of that licentious spirit in the lords which brought on the Wars of the Roses, indicates the approach of destruction to the feudal, artistic, and moral power of the northern nations.

For which reason, and many others, I must yet delay the following out of our main subject, till I have answered the other question, which brought me to pause in the middle of this chapter, namely, 'What is a weed?'

CHAPTER VI.

THE PARABLE OF JOASH.

1. SOME ten or twelve years ago, I bought—three times twelve are thirty-six—of a delightful little book by Mrs. Gatty, called 'Aunt Judy's Tales'—whereof to make presents to my little lady friends. I had, at that happy time, perhaps from four-and-twenty to six-and-thirty—I forget exactly how many—very particular little lady friends; and greatly wished Aunt Judy to be the thirty-seventh,—the kindest, wittiest, prettiest girl one had ever read of, at least in so entirely proper and orthodox literature.

2. Not but that it is a suspicious sign of infirmity of faith in our modern moralists to make their exemplary young peo-

ple always pretty ; and dress them always in the height of the fashion. One may read Miss Edgeworth's 'Harry and Lucy,' 'Frank and Mary,' 'Fashionable Tales,' or 'Parents' Assistant,' through, from end to end, with extremest care ; and never find out whether Lucy was tall or short, nor whether Mary was dark or fair, nor how Miss Annaly was dressed, nor, —which was my own chief point of interest—what was the colour of Rosamond's eyes. Whereas Aunt Judy, in charming position after position, is shown to have expressed all her pure evangelical principles with the prettiest of lips ; and to have had her gown, though puritanically plain, made by one of the best modistes in London.

3. Nevertheless, the book is wholesome and useful ; and the nicest story in it, as far as I recollect, is an inquiry into the subject which is our present business, 'What is a weed ?'—in which, by many pleasant devices, Aunt Judy leads her little brothers and sisters to discern that a weed is 'a plant in the wrong place.'

'Vegetable' in the wrong place, by the way, I think Aunt Judy says, being a precisely scientific little aunt. But I can't keep it out of my own less scientific head that 'vegetable' means only something going to be boiled. I like 'plant' better for general sense, besides that it's shorter.

Whatever we call them, Aunt Judy is perfectly right about them as far as she has gone ; but, as happens often even to the best of evangelical instructresses, she has stopped just short of the gist of the whole matter. It is entirely true that a weed is a plant that has got into a wrong place ; but it never seems to have occurred to Aunt Judy that some plants never *do* !

Who ever saw a wood anemone or a heath blossom in the wrong place ? Who ever saw nettle or hemlock in a right one ? And yet, the difference between flower and weed, (I use, for convenience sake, these words in their familiar opposition,) certainly does not consist merely in the flowers being innocent, and the weed stinging and venomous. We do not call the nightshade a weed in our hedges, nor the scarlet agaric in our woods. But we do the corncockle in our fields.

4. Had the thoughtful little tutoress gone but one thought

farther, and instead of "a vegetable in a wrong place," (which it may happen to the innocentest vegetable sometimes to be, without turning into a weed, therefore,) said, "A vegetable which has an innate disposition to *get* into the wrong place," she would have greatly furthered the matter for us; but then she perhaps would have felt herself to be uncharitably dividing with vegetables her own little evangelical property of original sin.

5. This, you will find, nevertheless, to be the very essence of weed character—in plants, as in men. If you glance through your botanical books, you will see often added certain names—"a troublesome weed." It is not its being venomous, or ugly, but its being impertinent—thrusting itself where it has no business, and hinders other people's business—that makes a weed of it. The most accursed of all vegetables, the one that has destroyed for the present even the possibility of European civilization, is only called a weed in the slang of its votaries; * but in the finest and truest English we call so the plant which has come to us by chance from the same country, the type of mere senseless prolific activity, the American water-plant, choking our streams till the very fish that leap out of them cannot fall back, but die on the clogged surface; and indeed, for this unrestrainable, unconquerable insolence of uselessness, what name can be enough dishonourable?

6. I pass to vegetation of nobler rank.

You remember, I was obliged in the last chapter to leave my poppy, for the present, without an English specific name, because I don't like Gerard's 'corn-rose,' and can't yet think of another. Nevertheless, I would have used Gerard's name, if the corn-rose were as much a rose as the corn-flag is a flag. But it isn't. The rose and lily have quite different relations to the corn. The lily is grass in loveliness, as the corn is grass in use; and both grow together in peace—gladiolus in the wheat, and narcissus in the pasture. But the rose is of

* And I have too harshly called our English Vines, 'wicked weeds of Kent,' in Fors Clavigera, xxvii, vol. i, p. 377. Much may be said for Ale, when we brew it for our people honestly.

another and higher order than the corn, and you never saw a cornfield overrun with sweetbrier or apple-blossom.

They have no mind, they, to get into the wrong place.

What is it, then, this temper in some plants—malicious as it seems—intrusive, at all events, or erring;—which brings them out of their places—thrusts them where they thwart us and offend?

7. Primarily, it is mere hardihood and coarseness of make. A plant that can live anywhere, will often live where it is not wanted. But the delicate and tender ones keep at home. You have no trouble in 'keeping down' the spring gentian. It rejoices in its own Alpine home, and makes the earth as like heaven as it can, but yields as softly as the air, if you want it to give place. Here in England, it will only grow on the loneliest moors, above the high force of Tees; its Latin name, for us (I may as well tell you at once) is to be '*Lucia verna*;' and its English one, Lucy of Teesdale.

8. But a plant may be hardy, and coarse of make, and able to live anywhere, and yet be no weed. The coltsfoot, so far as I know, is the first of large-leaved plants to grow afresh on ground that has been disturbed: fall of Alpine debris, ruin of railroad embankment, waste of drifted slime by flood, it seeks to heal and redeem; but it does not offend us in our gardens, nor impoverish us in our fields.

Nevertheless, mere coarseness of structure, indiscriminate hardihood, is at least a point of some unworthiness in a plant. That it should have no choice of home, no love of native land, is ungente; much more if such discrimination as it has, be immodest, and incline it, seemingly, to open and much-traversed places, where it may be continually seen of strangers.

The tormentilla gleams in showers along the mountain turf; her delicate crosslets are separate, though constellate, as the rubied daisy. But the king-cup—(blessing be upon it always no less)—crowds itself sometimes into too burnished flame of inevitable gold. I don't know if there was anything in the darkness of this last spring to make it brighter in resistance; but I never saw any spaces of full warm yellow, in natural colour, so intense as the meadows between Reading

and the Thames ; nor did I know perfectly what purple and gold meant, till I saw a field of park land embroidered a foot deep with king-cup and clover—while I was correcting my last notes on the spring colours of the Royal Academy—at Aylesbury.

9. And there are two other questions of extreme subtlety connected with this main one. What shall we say of the plants whose entire destiny is parasitic—which are not only sometimes, and *impertinently*, but always, and *pertinently*, out of place ; not only out of the right place, but out of any place of their own ? When is mistletoe, for instance, in the right place, young ladies, think you ? On an apple tree, or on a ceiling ? When is ivy in the right place ?—when wallflower ? The ivy has been torn down from the towers of Kenilworth ; the weeds from the arches of the Coliseum, and from the steps of the Araceli, irreverently, vilely, and in vain ; but how are we to separate the creatures whose office it is to abate the grief of ruin by their gentleness,

“ wafting wallflower scents
From out the crumbling ruins of fallen pride,
And chambers of transgression, now forlorn,”

from those which truly resists the toil of men, and conspire against their fame ; which are cunning to consume, and prolific to encumber ; and of whose perverse and unwelcome sowing we know, and can say assuredly, “ An enemy hath done this.”

10. Again. The character of strength which gives prevalence over others to any common plant, is more or less consistently dependent on woody fibre in the leaves : giving them strong ribs and great expanding extent ; or spinous edges, and wrinkled or gathered extent.

Get clearly into your mind the nature of these two conditions. When a leaf is to be spread wide, like the Burdock, it is supported by a framework of extending ribs like a Gothic roof. The supporting function of these is geometrical ; every one is constructed like the girders of a bridge, or beams of a floor, with all manner of science in the distribution of their

substance in the section, for narrow and deep strength ; and the shafts are mostly hollow. But when the extending space of a leaf is to be enriched with fulness of folds, and become beautiful in wrinkles, this may be done either by pure undulation as of a liquid current along the leaf edge, or by sharp 'drawing'—or 'gathering' I believe ladies would call it—and stitching of the edges together. And this stitching together, if to be done very strongly, is done round a bit of stick, as a sail is reefed round a mast ; and this bit of stick needs to be compactly, not geometrically strong ; its function is essentially that of starch,—not to hold the leaf up off the ground against gravity ; but to stick the edges out, stiffly, in a crimped frill. And in beautiful work of this kind, which we are meant to study, the stays of the leaf—or stay-bones—are finished off very sharply and exquisitely at the points ; and indeed so much so, that they prick our fingers when we touch them ; for they are not at all meant to be touched, but admired.

11. To be admired,—with qualification, indeed, always, but with extreme respect for their endurance and orderliness. Among flowers that pass away, and leaves that shake as with ague, or shrink like bad cloth,—these, in their sturdy growth and enduring life, we are bound to honour ; and, under the green holly, remember how much softer friendship was failing, and how much of other loving, folly. And yet—you are not to confuse the thistle with the cedar that is in Lebanon ; nor to forget—if the spinous nature of it become too cruel to provoke and offend—the parable of Joash to Amaziah, and its fulfilment : "There passed by a wild beast that was in Lebanon, and trode down the thistle."

12. Then, lastly, if this rudeness and insensitiveness of nature be gifted with no redeeming beauty ; if the boss of the thistle lose its purple, and the star of the Lion's tooth, its light ; and, much more, if service be perverted as beauty is lost, and the honied tube, and medicinal leaf, change into mere swollen emptiness, and salt brown membrane, swayed in nerveless languor by the idle sea,—at last the separation between the two natures is as great as between the fruitful earth and fruitless ocean ; and between the living hands that

tend the Garden of Herbs where Love is, and those unclasped, that toss with tangle and with shells.

* * * * *

13. I had a long bit in my head, that I wanted to write, about St. George of the Seaweed, but I've no time to do it; and those few words of Tennyson's are enough, if one thinks of them: only I see, in correcting press, that I've partly misapplied the idea of 'gathering' in the leaf edge. It would be more accurate to say it was gathered at the central rib; but there is nothing in needlework that will represent the actual excess by lateral growth at the edge, giving three or four inches of edge for one of centre. But the stiffening of the fold by the thorn which holds it out is very like the action of a ship's spars on its sails; and absolutely in many cases like that of the spines in a fish's fin, passing into the various conditions of serpentine and dracontic crest, connected with all the terrors and adversities of nature; not to be dealt with in a chapter on weeds.

14. Here is a sketch of a crested leaf of less adverse temper, which may as well be given, together with Plate III., in this number, these two engravings being meant for examples of two different methods of drawing, both useful according to character of subject. Plate III. is sketched first with a finely-pointed pen, and common ink, on white paper; then washed rapidly with colour, and retouched with the pen to give sharpness and completion. This method is used because the thistle leaves are full of complex and sharp sinuosities, and set with intensely sharp spines passing into hairs, which require many kinds of execution with the fine point to imitate at all. In the drawing there was more look of the bloom or woolliness on the stems, but it was useless to try for this in the mezzotint, and I desired Mr. Allen to leave his work at the stage where it expressed as much form as I wanted. The leaves are of the common marsh thistle, of which more anon; and the two long lateral ones are only two different views of the same leaf, while the central figure is a young leaf just opening. It beat me, in its delicate bossing, and I had to leave it, discontentedly enough.



PLATE III.—ACANTHOID LEAVES. NORTHERN ATTIC TYPE.



° PLATE IV.—CRESTED LEAVES. LETTUCE-THISTLE.

Plate IV. is much better work, being of an easier subject, adequately enough rendered by perfectly simple means. Here I had only a succulent and membranous surface to represent, with definite outlines, and merely undulating folds; and this is sufficiently done by a careful and firm pen outline on grey paper, with a slight wash of colour afterwards, reinforced in the darks; then marking the lights with white. This method is classic and authoritative, being used by many of the greatest masters, (by Holbein continually;) and it is much the best which the general student can adopt for expression of the action and muscular power of plants.

The goodness or badness of such work depends absolutely on the truth of the single line. You will find a thousand botanical drawings which will give you a delicate and deceptive resemblance of the leaf, for one that will give you the right convexity in its backbone, the right perspective of its peaks when they foreshorten, or the right relation of depth in the shading of its dimples. On which, in leaves as in faces, no little expression of temper depends.

Meantime we have yet to consider somewhat more touching that temper itself, in next chapter.

CHAPTER VII.

THE PARABLE OF JOTHAM.

1. I do not know if my readers were checked, as I wished them to be, at least for a moment, in the close of the last chapter, by my talking of thistles and dandelions changing into seaweed, by gradation of which, doubtless, Mr. Darwin can furnish us with specious and sufficient instances. But the two groups will not be contemplated in our Oxford system as in any parental relations whatsoever.

We shall, however, find some very notable relations existing between the two groups of the wild flowers of dry land, which represent, in the widest extent, and the distinctest opposition, the two characters of material serviceableness and unservice-

ableness ; the groups which in our English classification will be easily remembered as those of the Thyme, and the Daisy.

The one, scented as with incense—medicinal—and in all gentle and humble ways, useful. The other, scentless—helpless for ministry to the body ; infinitely dear as the bringer of light, ruby, white and gold ; the three colours of the Day, with no hue of shade in it. Therefore I take it on the coins of St. George for the symbol of the splendour or light of heaven, which is dearest where humblest.

2. Now these great two orders—of which the types are the thyme and the daisy—you are to remember generally as the ‘Herbs’ and the ‘Sunflowers.’ You are not to call them Lipped flowers, nor Composed flowers ; because the first is a vulgar term ; for when you once come to be able to draw a lip, or, in noble duty, to kiss one, you will know that no other flower in earth is like that : and the second is an indefinite term ; for a foxglove is as much a ‘composed’ flower as a daisy ; but it is composed in the shape of a spire, instead of the shape of the sun. And again a thistle, which common botany calls a composed flower, as well as a daisy, is composed in quite another shape, being on the whole, bossy instead of flat ; and of another temper, or composition of mind, also, being connected in that respect with butterburs, and a vast company of rough, knotty, half-black or brown, and generally unluminous—flowers I can scarcely call them—and weeds I will not,—creatures, at all events, in nowise to be gathered under the general name ‘Composed,’ with the stars that crown Chaucer’s Alcestis, when she returns to the day from the dead.

But the wilder and stronger blossoms of the Hawk’s-eye—again you see I refuse for them the word weed ;—and the waste-loving Chicory, which the Venetians call “*Sponsa solis*,” are all to be held in one class with the Sunflowers ; but dedicate,—the daisy to Alcestis alone ; others to Clytia, or the Physician Apollo himself ; but I can’t follow their mythology yet awhile.

3. Now in these two families you have typically Use op-

posed to Beauty in *wildness* ; it is their wildness which is their virtue ;—that the thyme is sweet where it is unthought of, and the daisies red, where the foot despises them : while, in other orders, wildness is their crime,—“ Wherefore, when I looked that it should bring forth grapes, brought it forth wild grapes ? ” But in all of them you must distinguish between the pure wildness of flowers and their distress. It may not be our duty to tame them ; but it must be, to relieve.

4. It chanced, as I was arranging the course of these two chapters, that I had examples given me of distressed and happy wildness, in immediate contrast. The first, I grieve to say, was in a bit of my own brushwood, left uncared-for evidently many a year before it became mine. I had to cut my way into it through a mass of thorny ruin ; black, birds-nest like, entanglement of brittle spray round twisted stems of ill-grown birches strangling each other, and changing half into roots among the rock clefts ; knotted stumps of never-blossoming blackthorn, and choked stragglings of holly, all laced and twisted and tethered round with an untouchable, almost unhewable, thatch, a foot thick, of dead bramble and rose, laid over rotten ground through which the water soaked ceaselessly, undermining it into merely unctuous clods and clots, knitted together by mossy sponge. It was all Nature's free doing ! she had had her way with it to the uttermost ; and clearly needed human help and interference in her business ; and yet there was not one plant in the whole ruinous and deathful riot of the place, whose nature was not in itself wholesome and lovely ; but all lost for want of discipline.

5. The other piece of wild growth was among the fallen blocks of limestone under Malham Cove. Sheltered by the cliff above from stress of wind, the ash and hazel wood spring there in a fair and perfect freedom, without a diseased bough, or an unwholesome shade. I do not know why mine is all encumbered with overgrowth, and this so lovely that scarce a branch could be gathered but with injury ;—while underneath, the oxalis, and the two smallest geraniums (*Lucidum* and *Herb-Robert*) and the mossy saxifrage, and the cross-leaved bed-straw, and the white pansy, wrought themselves

into wreaths among the fallen crags, in which every leaf rejoiced, and was at rest.

6. Now between these two states of equally natural growth, the point of difference that forced itself on me (and practically enough, in the work I had in my own wood), was not so much the withering and waste of the one, and the life of the other, as the thorniness and cruelty of the one, and the softness of the other. In Malham Cove, the stones of the brook were softer with moss than any silken pillow—the crowded oxalis leaves yielded to the pressure of the hand, and were not felt—the cloven leaves of the Herb-Robert and orbled clusters of its companion overflowed every rent in the rude crags with living balm; there was scarcely a place left by the tenderness of the happy things, where one might not lay down one's forehead on their warm softness, and sleep. But in the waste and distressed ground, the distress had changed itself to cruelty. The leaves had all perished, and the bending saplings, and the wood of trust;—but the thorns were there, immortal, and the gnarled and sapless roots, and the dusty treacheries of decay.

7. Of which things you will find it good to consider also otherwise than botanically. For all these lower organisms suffer and perish, or are gladdened and flourish, under conditions which are in utter precision symbolical, and in utter fidelity representative, of the conditions which induce adversity and prosperity in the kingdoms of men: and the Eternal Demeter,—Mother, and Judge,—brings forth, as the herb yielding seed, so also the thorn and the thistle, not to herself, but to thee.

8. You have read the words of the great Law often enough;—have you ever thought enough of them to know the difference between these two appointed means of Distress? The first, the Thorn, is the type of distress *caused by crime*, changing the soft and breathing leaf into inflexible and wounding stubbornness. The second is the distress appointed to be the means and herald of good,—Thou shalt see the stubborn thistle bursting, into glossy purple, which outredden, all voluptuous garden roses.

9. It is strange that, after much hunting, I cannot find authentic note of the day when Scotland took the thistle for her emblem; and I have no space (in this chapter at least) for tradition; but, with whatever lightness of construing we may receive the symbol, it is actually the truest that could have been found, for some conditions of the Scottish mind. There is no flower which the Proserpina of our Northern Sicily cherishes more dearly: and scarcely any of us recognize enough the beautiful power of its close-set stars, and rooted radiance of ground leaves; yet the stubbornness and ungraceful rectitude of its stem, and the besetting of its wholesome substance with that fringe of offence, and the forwardness of it, and dominance,—I fear to lacerate some of my dearest friends if I went on:—let them rather, with Bailie Jarvie's true conscience,* take their Scott from the inner shelf in their heart's library which all true Scotsmen give him, and trace, with the swift reading of memory, the characters of Fergus M'Ivor, Hector M'Intyre, Mause Headrigg, Alison Wilson, Richie Moniplies, and Andrew Fairservice; and then say, if the faults of all these, drawn as they are with a precision of touch like a Corinthian sculptor's of the acanthus leaf, can be found in anything like the same strength in other races, or if so stubbornly folded and starched moni-plies of irritating kindliness, selfish friendliness, lowly conceit, and intolerable fidelity, are native to any other spot of the wild earth of the habitable globe.

10. Will you note also—for this is of extreme interest—that these essential faults are all mean faults;—what we may call ground-growing faults; conditions of semi-education,

* Has my reader ever thought,—I never did till this moment,—how it perfects the exquisite character which Scott himself loved, as he invented, till he changed the form of the novel, that his habitual interjection should be this word;—not but that the oath, by conscience, was happily still remaining then in Scotland, taking the place of the mediæval 'by St. Andrew,' we in England, long before the Scot, having lost all sense of the Puritanical appeal to private conscience, as of the Catholic oath, 'by St. George;' and our uncanonized 'by George' in sonorous rudeness, ratifying, not now our common conscience, but our individual opinion.

of hardly-treated homelife, or of coarsely-minded and wandering prosperity. How literally may we go back from the living soul symbolized, to the strangely accurate earthly symbol, in the prickly weed. For if, with its bravery of endurance, and carelessness in choice of home, we find also definite faculty and habit of migration, volant mechanism for choiceless journey, not divinely directed in pilgrimage to known shrines ; but carried at the wind's will by a Spirit which listeth *not*—it will go hard but that the plant shall become, if not dreaded, at least despised ; and, in its wandering and reckless splendour, disgrace the garden of the sluggard, and possess the inheritance of the prodigal : until even its own nature seems contrary to good, and the invocation of the just man be made to it as the executor of Judgment, “ Let thistles grow instead of wheat, and cockle instead of barley.”

11. Yet to be despised—either for men or flowers—may be no ill-fortune ; the real ill-fortune is only to be despicable. These faults of human character, wherever found, observe, belong to it as ill-trained—incomplete ; confirm themselves only in the vulgar. There is no base pertinacity, no overweening conceit, in the Black Douglas, or Claverhouse, or Montrose ; in these we find the pure Scottish temper, of heroic endurance and royal pride ; but, when, in the pay, and not deceived, but purchased, idolatry of Mammon, the Scottish persistence and pride become knit and vested in the spleuchan, and your stiff Covenanter makes his covenant with Death, and your Old Mortality deciphers only the senseless legends of the eternal gravestone,—you get your weed, earth grown, in bitter verity, and earth-devastating, in bitter strength.

12. I have told you, elsewhere, we are always first to study national character in the highest and purest examples. But if our knowledge is to be complete, we have to study also the special diseases of national character. And in exact opposition to the most solemn virtue of Scotland, the domestic truth and tenderness breathed in all Scottish song, you have this special disease and mortal cancer, this woody-fibriness, literally, of temper and thought : the consummation of which into pure

lignite, or rather black Devil's charcoal—the sap of the birks of Aberfeldy become cinder; and the blessed juices of them, deadly gas,—you may know in its pure blackness best in the work of the greatest of these ground-growing Scotchmen, Adam Smith.

13. No man of like capacity, I believe, born of any other nation, could have deliberately, and with no momentary shadow of suspicion or question, formalized the spinous and monstrous fallacy that human commerce and policy are *naturally* founded on the desire of every man to possess his neighbour's goods.

This is the 'release unto us Barábbas,' with a witness; and the deliberate systematization of that cry, and choice, for perpetual repetition and fulfilment in Christian statesmanship, has been, with the strange precision of natural symbolism and retribution, signed, (as of old, by strewing of ashes on Kidron,) by strewing of ashes on the brooks of Scotland; waters once of life, health, music, and divine tradition; but to whose festering scum you may now set fire with a candle; and of which, round the once excelling palace of Scotland, modern sanitary science is now helplessly contending with the poisonous exhalations.

14. I gave this chapter its heading, because I had it in my mind to work out the meaning of the fable in the ninth chapter of Judges, from what I had seen on that thorny ground of mine, where the bramble was king over all the trees of the wood. But the thoughts are gone from me now; and as I re-read the chapter of Judges,—now, except in my memory, unread, as it chanced, for many a year,—the sadness of that story of Gideon fastens on me, and silences me. *This* the end of his angel visions, and dream-led victories, the slaughter of all his sons but this youngest,*—and he never again heard of in Israel!

You Scottish children of the Rock, taught through all your once pastoral and noble lives by many a sweet miracle of dew on fleece and ground,—once servants of mighty kings, and

* 'Jotham,' 'Sum perfectio eorum,' or 'Consummatio eorum.' (Interpretation of name in Vulgate index.)

keepers of sacred covenant ; have you indeed dealt truly with your warrior kings, and prophet saints, or are these ruins of their homes, and shrines, dark with the fire that fell from the curse of Jerubbaal ?

CHAPTER VIII.

THE STEM.

1. As I read over again, with a fresh mind, the last chapter, I am struck by the opposition of states which seem best to fit a weed for a weed's work,—stubbornness, namely, and flaccidity. On the one hand, a sternness and a coarseness of structure which changes its stem into a stake, and its leaf into a spine ; on the other, an utter flaccidity and ventosity of structure, which changes its stem into a riband, and its leaf into a bubble. And before we go farther—for we are not yet at the end of our study of these obnoxious things—we had better complete an examination of the parts of a plant in general, by ascertaining what a Stem proper is ; and what makes it stiffer, or hollower, than we like it ;—how, to wit, the gracious and generous strength of ash differs from the spinous obstinacy of black-thorn,—and how the geometric and enduring hollowness of a stalk of wheat differs from the soft fulness of that of a mushroom. To which end, I will take up a piece of study, not of black, but white, thorn, written last spring.

2. I suppose there is no question but that all nice people like hawthorn blossom.

I want, if I can, to find out to-day, 25th May, 1875, what it is we like it so much for : holding these two branches of it in my hand—one full out, the other in youth. This full one is a mere mass of symmetrically balanced—snow, one was going vaguely to write, in the first impulse. But it is nothing of the sort. White,—yes, in a high degree ; and pure, totally ; but not at all dazzling in the white, nor pure in an insultingly rivalless manner, as snow would be ; yet pure somehow, certainly ; and white, absolutely, in spite of what might be thought failure,—imperfection—nay, even distress and loss in it. For

every little rose of it has a green darkness in the centre—not even a pretty green, but a faded, yellowish, glutinous, unaccomplished green; and round that, all over the surface of the blossom, whose shell-like petals are themselves deep sunk, with grey shadows in the hollows of them—all above this already subdued brightness, are strewn the dark points of the dead stamens—manifest more and more, the longer one looks, as a kind of grey sand, sprinkled without sparing over what looked at first unspotted light. And in all the ways of it the lovely thing is more like the spring frock of some prudent little maid of fourteen, than a flower;—frock with some little spotty pattern on it to keep it from showing an unintended and inadvertent spot,—if Fate should ever inflict such a thing! Undeveloped, thinks Mr. Darwin,—the poor short-coming, ill-blanced thorn blossom—going to be a Rose, some day soon; and, what next?—who knows?—perhaps a *Pæony*!

3. Then this next branch, in dawn and delight of youth, set with opening clusters of yet numerable blossom, four, and five, and seven, edged, and islanded, and ended, by the sharp leaves of freshest green, deepened under the flowers, and studied round with bosses, better than pearl beads of *St. Agnes' rosary*,—folded over and over, with the edges of their little leaves pouting, as the very softest waves do on flat sand where one meets another; then opening just enough to show the violet colour within—which yet isn't violet colour, nor even "*meno che le rose*," but a different colour from every other lilac that one ever saw;—faint and faded even before it sees light, as the filmy cup opens over the depth of it, then broken into purple motes of tired bloom, fading into darkness, as the cup extends into the perfect rose.

This, with all its sweet change that one would so fain stay, and soft effulgence of bud into softly falling flower, one has watched—how often; but always with the feeling that the blossoms are thrown over the green depth like white clouds—never with any idea of so much as asking what holds the clouds there. Have each of the innumerable blossoms a separate stalk? and, if so, how is it that one never thinks of the stalk, as one does with currants?

4. Turn the side of the branch to you ;—Nature never meant you to see it so ; but now it is all stalk below, and stamens above,—the petals nothing, the stalks all tiny trees, always dividing their branches mainly into three—one in the centre short, and the two lateral, long, with an intermediate extremely long one, if needed, to fill a gap, so contriving that the flowers shall all be nearly at the same level, or at least surface of ball, like a guelder rose. But the cunning with which the tree conceals its structure till the blossom is fallen, and then—for a little while, we had best look no more at it, for it is all like grape-stalks with no grapes.

These, whether carrying hawthorn blossom and haw, or grape blossom and grape, or peach blossom and peach, you will simply call the ‘stalk,’ whether of flower or fruit. A ‘stalk’ is essentially round, like a pillar ; and has, for the most part, the power of first developing, and then shaking off, flower and fruit from its extremities. You can pull the peach from its stalk, the cherry, the grape. Always at some time of its existence, the flower-stalk lets fall something of what it sustained, petal or seed.

In late Latin it is called ‘petiolus,’ the little foot ; because the expanding piece that holds the grape, or olive, is a little like an animal’s foot. Modern botanists have misapplied the word to the *leaf*-stalk, which has no resemblance to a foot at all. We must keep the word to its proper meaning, and, when we want to write Latin, call it ‘petiolus ;’ when we want to write English, call it ‘stalk,’ meaning always fruit or flower stalk.

I cannot find when the word ‘stalk’ first appears in English :—its derivation will be given presently.

5. Gather next a hawthorn leaf. That also has a stalk ; but you can’t shake the leaf off it. It, and the leaf, are essentially one ; for the sustaining fibre runs up into every ripple or jag of the leaf’s edge : and its section is different from that of the flower-stalk ; it is no more round, but has an upper and under surface, quite different from each other. It will be better, however, to take a larger leaf to examine this structure in. Cabbage, cauliflower, or rhubarb, would any of them be good,

but don't grow wild in the luxuriance I want. So, if you please, we will take a leaf of burdock, (*Arctium Lappa*,) the principal business of that plant being clearly to grow leaves wherewith to adorn fore-grounds.*

6. The outline of it in Sowerby is not an intelligent one, and I have not time to draw it but in the rudest way myself; Fig. 13, *a*; with perspectives of the elementary form below, *b*, *c*, and *d*. By help of which, if you will construct a burdock leaf in paper, my rude outline (*a*) may tell the rest of what I want you to see.

Take a sheet of stout note paper, Fig. 14, *A*, double it sharply down the centre, by the dotted line, then give it the two cuts at *a* and *b*, and double those pieces sharply back, as at *B*; then, opening them again, cut the whole into the form *C*; and then, pulling up the corners *c* *d*, stitch them together with a loose thread so that the points *c* and *d* shall be within half an inch of each other; and you will have a kind of triangular scoop, or shovel, with a stem, by which you can sufficiently hold it, *D*.

7. And from this easily constructed and tenable model, you may learn at once these following main facts about all leaves.

* If you will look at the engraving, in the England and Wales series, of Turner's Oakhampton, you will see its use.

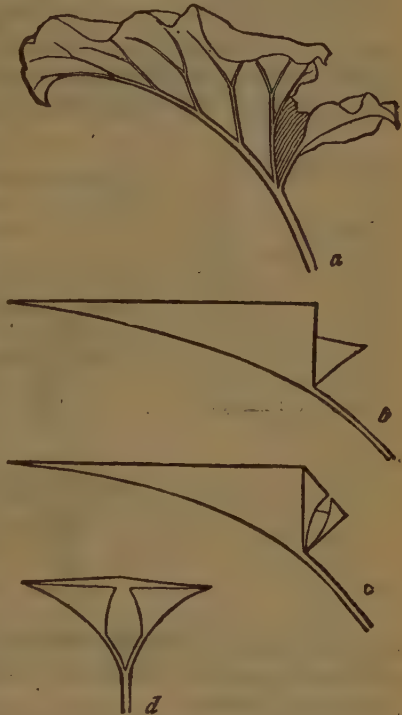


FIG. 13.

[I.] That they are not flat, but, however slightly, always hollowed into craters, or raised into hills, in one or another direction ; so that any drawable outline of them does not in the least represent the real extent of their surfaces ; and until you know how to draw a cup, or a mountain, rightly, you have no chance of drawing a leaf. My simple artist readers of long ago, when I told them to draw leaves, thought they could do them by the boughful, whenever they liked. Alas, except by old William Hunt, and Burne Jones, I've not seen a leaf painted, since those burdocks of Turner's ; far less sculptured—though

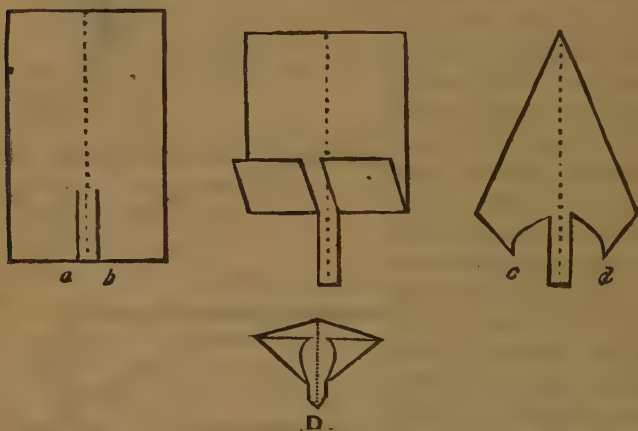


FIG. 14.

one would think at first that was easier ! Of which we shall have talk elsewhere ; here I must go on to note fact number two, concerning leaves.

8. [II.] The strength of their supporting stem consists not merely in the gathering together of all the fibres, but in gathering them essentially into the profile of the letter V, which you will see your doubled paper stem has ; and of which you can feel the strength and use, in your hand, as you hold it. Gather a common plantain leaf, and look at the way it puts its round ribs together at the base, and you will understand the matter at once. The arrangement is modified and

disguised in every possible way, according to the leaf's need : in the aspen, the leaf-stalk becomes an absolute vertical plank ; and in the large trees is often almost rounded into the likeness of a fruit-stalk ;—but, in all,* the essential structure is this doubled one ; and in all, it opens at the place where the leaf joins the main stem, into a kind of cup, which holds next year's bud in the hollow of it.

9. Now there would be no inconvenience in your simply getting into the habit of calling the round petiol of the fruit the 'stalk,' and the contracted channel of the leaf, 'leaf-stalk.' But this way of naming them would not enforce, nor fasten in your mind, the difference between the two, so well as if you have an entirely different name for the leaf-stalk. Which is the more desirable, because the limiting character of the leaf, botanically, is—(I only learned this from my botanical friend the other day, just in the very moment I wanted it,)—that it holds the bud of the new stem in its own hollow, but cannot itself grow in the hollow of anything else ;—or, in botanical language, leaves are never axillary,—don't grow in armpits, but are themselves armpits ; hollows, that is to say, where they spring from the main stem.

10. Now there is already a received and useful botanical word, 'cyme' (which we shall want in a little while,) derived from the Greek *κύμα*, a swelling or rising wave, and used to express a swelling cluster of foamy blossom. Connected with that word, but in a sort the reverse of it, you have the Greek '*κύβη*,' the hollow of a cup, or bowl ; whence *κύβαλον*, a cymbal,—that is to say, a musical instrument owing its tone to its hollowness. These words become in Latin, *cymba*, and *cymbalum* ; and I think you will find it entirely convenient and advantageous to call the leaf-stalk distinctively the 'cymba,' retaining the mingled idea of cup and boat, with respect at least to the part of it that holds the bud ; and understanding that it gathers itself into a V-shaped, or even narrowly vertical, section, as a boat narrows to its bow, for strength to sustain the leaf.

* General assertions of this kind must always be accepted under indulgence,—exceptions being made afterwards.

With this word you may learn the Virgilian line, that shows the final use of iron—or iron-darkened—ships :

“Et ferruginēâ subvectat corpora cymbâ.”

The “subvectat corpora” will serve to remind you of the office of the leafy cymba in carrying the bud ; and make you thankful that the said leafy vase is not of iron ; and is a ship of Life instead of Death.

11. Already, not once, nor twice, I have had to use the word ‘stem,’ of the main round branch from which both stalk and cymba spring. This word you had better keep for all growing, or advancing, shoots of trees, whether from the ground, or from central trunks and branches. I regret that the words multiply on us ; but each that I permit myself to use has its own proper thought or idea to express, as you will presently perceive ; so that true knowledge multiplies with true words.

12. The ‘stem,’ you are to say, then, when you mean the *advancing* shoot,—which lengthens annually, while a stalk ends every year in a blossom, and a cymba in a leaf. A stem is essentially round,* square, or regularly polygonal ; though, as a cymba may become exceptionally round, a stem may become exceptionally flat, or even mimic the shape of a leaf. Indeed I should have liked to write “a stem is essentially round, and constructively, on occasion, square,”—but it would have been too grand. The fact is, however, that a stem is really a roundly minded thing, throwing off its branches in circles as a trundled mop throws off drops, though it can always order the branches to fly off in what order it likes,—two at a time, opposite to each other ; or three, or five, in a spiral coil ; or one here and one there, on this side and that ; but it is always twisting, in its own inner mind and force ; hence it is especially proper to use the word ‘stem’ of it—*στέμμα*, a twined wreath ; properly, twined round a staff, or sceptre : therefore, learn at once by heart these lines in the opening Iliad :

“Στέμματ’ ἔχων ἐν χερσὶν ἐκηβόλου Ἀπόλλωνος,
Χρυσέφ. ἀνὰ σκήπτρῳ.”

And recollect that a sceptre is properly a staff to lean upon ; and that as a crown or diadem is first a binding thing, a

* I use ‘round’ rather than ‘cylindrical,’ for simplicity’s sake.



PLATE V.—OCCULT SPIRAL ACTION. WASTE-THISTLE.

‘sceptre’ is first a *supporting* thing, and it is in its nobleness, itself made of the stem of a young tree. You may just as well learn also this :

“Ναὶ μὰ τόδε σκῆπτρον, τὸ μὲν οὐποτε φύλλα καὶ ἔζους
 φύσει, ἐπειδὴ πρῶτα τομῇν ἐν ὕρεσσι λέλοιπεν,
 Οὐδ’ ἀναθλήσει· περὶ γὰρ ῥά ἐ χαλκὸς ἔλεψε
 Φύλλα’ τε καὶ φλοιόν· νῦν αὖτε μιν υἷες Ἀχαιῶν
 Ἐν παλάμῃς φορέονσι δικασπόλοι, οἳ τε θέμιστας
 Πρὸς Διὸς εἰρύεται.”

“Now, by this sacred sceptre hear me swear
 Which never more shall leaves or blossoms bear,
 Which, severed from the trunk, (as I from thee,)
 On the bare mountains left its parent tree ;
 This sceptre, formed by tempered steel to prove—
 An ensign of the delegates of Jove,
 From whom the power of laws and justice springs
 (Tremendous oath, inviolate to Kings).”

13. The supporting power in the tree itself is, I doubt not, greatly increased by this spiral action ; and the fine instinct of its being so, caused the twisted pillar to be used in the Lombardic Gothic,—at first, merely as a pleasant variety of form, but at last constructively and universally, by Giotto and all the architects of his school. Not that the spiral form actually adds to the strength of a Lombardic pillar, by imitating contortions of wood, any more than the fluting of a Doric shaft adds to its strength by imitating the canaliculation of a reed ; but the perfect action of the imagination, which had adopted the encircling acanthus for the capital, adopted the twining stemma for the shaft ; the pure delight of the eye being the first condition in either case : and it is inconceivable how much of the pleasure taken both in ornament and in natural form is founded elementarily on groups of spiral line. The study in our fifth plate, of the involucre of the waste-thistle,* is as good an example as I can give of the more subtle and concealed conditions of this structure.

* *Carduus Arvensis*. ‘Creeping Thistle,’ in Sowerby ; why, I cannot conceive, for there is no more creeping in it than in a furzebush. But it especially haunts foul and neglected ground ; so I keep the Latin

14. Returning to our present business of nomenclature, we find the Greek word, 'stenima,' adopted by the Latins, becoming the expression of a growing and hereditary race ; and the branched tree, the natural type, among all nations, of multiplied families. Hence the entire fitness of the word for our present purposes ; as signifying, "a spiral shoot extending itself by branches." But since, unless it is spiral, it is not a stem, and unless it has branches, it is not a stem, we shall still want another word for the sustaining 'sceptre' of a foxglove, or cowslip. Before determining that, however, we must see what need there may be of one familiar to our ears until lately, although now, I understand, falling into disuse.

15. By our definition, a stem is a spirally bent, essentially living and growing, shoot of vegetation. But the branch of a tree, in which many such stems have their origin, is not, except in a very subtle and partial way, spiral ; nor, except in the shoots that spring from it, progressive forwards ; it only receives increase of thickness at its sides. Much more, what used to be called the *trunk* of a tree, in which many branches are united, has ceased to be, except in mere tendency and temper, spiral ; and has so far ceased from growing as to be often in a state of decay in its interior, while the external layers are still in serviceable strength.

16. If, however, a trunk were only to be defined as an arrested stem, or a cluster of arrested stems, we might perhaps refuse, in scientific use, the popular word. But such a definition does not touch the main idea. Branches usually begin to assert themselves at a height above the ground approximately fixed for each species of tree,—low in an oak, high in a stone pine ; but, in both, marked as a point of *structural change in the direction of growing force*, like the spring of a

name, translating 'Waste-Thistle.' I could not show the variety of the curves of the involucre without enlarging ; and if, on this much increased scale, I had tried to draw the flower, it would have taken Mr. Allen and me a good month's more work. And I had no more a month than a life, to spare : so the action only of the spreading flower is indicated, but the involucre drawn with precision.

vault from a pillar ; and as the tree grows old, some of its branches getting torn away by winds or falling under the weight of their own fruit, or load of snow, or by natural decay, there remains literally a 'truncated' mass of timber, still bearing irregular branches here and there, but inevitably suggestive of resemblance to a human body, after the loss of some of its limbs.

And to prepare trees for their practical service, what age and storm only do partially, the first rough process of human art does completely. The branches are lopped away, leaving literally the 'truncus' as the part of the tree out of which log and rafter can be cut. And in many trees, it would appear to be the chief end of their being to produce this part of their body on a grand scale, and of noble substance ; so that, while in thinking of vegetable life without reference to its use to men or animals, we should rightly say that the essence of it was in leaf and flower—not in trunk or fruit ; yet for the sake of animals, we find that some plants, like the vine, are apparently meant chiefly to produce fruit ; others, like laurels, chiefly to produce leaves ; others chiefly to produce flowers ; and others to produce permanently serviceable and sculptural wood ; or, in some cases, merely picturesque and monumental masses of vegetable rock, "intertwisted fibres serpentine,"—of far nobler and more pathetic use in their places, and their enduring age, than ever they could be for material purpose in human habitation. For this central mass of the vegetable organism, then, the English word 'trunk' and French 'tronc' are always in accurate scholarship to be retained—meaning the part of a tree which remains when its branches are lopped away.

17. We have now got distinct ideas of four different kinds of stem, and simple names for them in Latin and English,—Petiolus, Cymba, Stemma, and Truncus ; Stalk, Leaf-stalk, Stem, and Trunk ; and these are all that we shall commonly need. There is, however, one more that will be sometimes necessary, though it is ugly and difficult to pronounce, and must be as little used as we can.

And here I must ask you to learn with me a little piece of

Roman history. I say, to *learn* with me, because I don't know any Roman history except the two first books of Livy, and little bits here and there of the following six or seven. I only just know enough about it to be able to make out the bearings and meaning of any fact that I now learn. The greater number of modern historians know, (if honest enough even for that,) the facts, or something that may possibly be like the facts, but haven't the least notion of the meaning of them. So that, though I have to find out everything that I want in Smith's dictionary, like any schoolboy, I can usually tell you the significance of what I so find, better than perhaps even Mr. Smith himself could.

18. In the 586th page of Mr. Smith's volume, you have it written that 'Calvus,' bald-head, was the name of a family of the Licinia gens; that the man of whom we hear earliest, as so named, was the first plebeian elected to military tribuneship in B.C. 400; and that the fourth of whom we hear, was surnamed 'Stolo,' because he was so particular in pruning away the Stolons (stolones), or useless young shoots, of his vines.

We must keep this word 'stolon,' therefore, for these young suckers springing from an old root. Its derivation is uncertain; but the main idea meant by it is one of uselessness,—sprouting without occasion or fruit; and the words 'stolidus' and 'stolid' are really its derivatives, though we have lost their sense in English by partly confusing them with 'solid' which they have nothing to do with. A 'stolid' person is essentially a 'useless sucker' of society; frequently very leafy and graceful, but with no good in him.

19. Nevertheless, I won't allow our vegetable 'stolons' to be despised. Some of quite the most beautiful forms of leafage belong to them;—even the foliage of the olive itself is never seen to the same perfection on the upper branches as in the young ground-rods in which the dual groups of leaves crowd themselves in their haste into clusters of three.

But, for our point of Latin history, remember always that in 400 B.C., just a year before the death of Socrates at Athens, this family of Stolid persons manifested themselves at Rome,

shooting up from plebeian roots into places where they had no business ; and preparing the way for the degradation of the entire Roman race under the Empire ; their success being owed, remember also, to the faults of the patricians, for one of the laws passed by Calvus Stolo was that the Sibylline books should be in custody of ten men, of whom five should be plebeian, “ that no falsifications might be introduced in favour of the patricians.”

20. All this time, however, we have got no name for the prettiest of all stems,—that of annual flowers growing high from among their ground leaves, like lilies of the valley, and saxifrages, and the tall primulas—of which this pretty type, Fig. 15, was cut for me by Mr. Burgess years ago ; admirable in its light outline of the foamy globe of flowers, supported and balanced in the meadow breezes on that elastic rod of slenderest life.

What shall we call it ? We had better rest from our study of terms a little, and do a piece of needful classifying, before we try to name it.

21. My younger readers will find it easy to learn, and convenient to remember, for a beginning of their science, the names of twelve great families of cinquefoiled flowers,* of which the first group of three, is for the most part golden, the second, blue, the third, purple, and the fourth, red.

And their names, by simple lips, can be pleasantly said, or sung, in this order, the two first only being a little difficult to get over.

* The florets gathered in the daisy are cinquefoils, examined closely. No system founded on colour can be very general or unexceptionable : but the splendid purples of the pansy, and thistle, which will be made one of the lower composite groups under *Margarita*, may justify the general assertion of this order's being purple.



FIG. 15.

1	2	3	4
Roof-foil,	Lucy,	Pea,	Pink,
Rock-foil,	Blue-bell,	Pansy,	Peach,
Primrose.	Bindweed.	Daisy.	Rose.

Which even in their Latin magniloquence will not be too terrible, namely,—

1	2	3	4
Stella,	Lucia,	Alata,	Clarissa,
Francesca,	Campanula,	Viola,	Persica,
Primula.	Convolvula.	Margarita.	Rosa.

22. I do not care much to assert or debate my reasons for the changes of nomenclature made in this list. The most gratuitous is that of 'Lucy' for 'Gentian,' because the King of Macedon, from whom the flower has been so long named, was by no means a person deserving of so consecrated memory. I conceive no excuse needed for rejecting Caryophyll, one of the crudest and absurdest words ever coined by unscholarly men of science ; or Papilionaceæ, which is unendurably long for pease ; and when we are now writing Latin, in a sentimental temper, and wish to say that we gathered a daisy, we shall not any more be compelled to write that we gathered a 'Bellidem perennem,' or, an 'Oculum Diei.'

I take the pure Latin form, Margarita, instead of Margareta, in memory of Margherita of Cortona,* as well as of the great saint : also the tiny scatterings and sparklings of the daisy on the turf may remind us of the old use of the word 'Margaritæ,' for the minute particles of the Host sprinkled on the patina—"Has particulas *μερίδας* vocat Euchologium, *μαργαρίτας* Liturgia Chrysostomi."† My young German readers will, I hope, call the flower Gretschen,—unless they would uproot the daisies of the Rhine, lest French girls should also

* See Miss Yonge's exhaustive account of the Name, 'History of Christian Names,' vol. i., p. 265.

† (Du Cange.) The word 'Margarete' is given as heraldic English for pearl, by Lady Juliana Berners, in the book of St. Albans.

count their love-lots by the Marguerite. I must be so ungracious to my fair young readers, however, as to warn them that this trial of their lovers is a very favourable one, for, in nine blossoms out of ten, the leaves of the Marguerite are odd, so that, if they are only gracious enough to begin with the supposition that he loves them, they must needs end in the conviction of it.

23. I am concerned, however, for the present, only with my first or golden order, of which the Roof-foil, or house-leek, is called in present botany, *Sedum*, 'the squatter,' because of its way of fastening itself down on stones, or roof, as close as it can sit. But I think this an ungraceful notion of its behaviour; and as its blossoms are, of all flowers, the most sharply and distinctly star-shaped, I shall call it '*Stella*' (providing otherwise, in due time, for the poor little chickweeds;) and the common stonecrop will therefore be '*Stella domestica*.'

The second tribe, (at present *saxifraga*,) growing for the most part wild on rocks, may, I trust, even in Protestant botany, be named *Francesca*, after St. Francis of Assisi; not only for its modesty, and love of mountain ground, and poverty of colour and leaf; but also because the chief element of its decoration, seen close, will be found in its spots, or stigmata.

In the nomenclature of the third order I make no change.

24. Now all this group of golden-blossoming plants agree in general character of having a rich cluster of radical leaves, from which they throw up a single stalk bearing clustered blossoms; for which stalk, when entirely leafless, I intend always to keep the term '*virgula*,' the 'little rod'—not painfully caring about it, but being able thus to define it with precision, if required. And these are connected with the stems of branching shrubs through infinite varieties of structure, in which the first steps of transition are made by carrying the cluster of radical leaves up, and letting them expire gradually from the rising stem: the changes of form in the leaves as they rise higher from the ground being one of quite the most interesting specific studies in every plant. I had set myself once, in a bye-study for foreground drawing, hard on this point; and began, with Mr. Burgess, a complete analysis of the foliation

of annual stems ; of which Line-studies II., III., and IV. are examples ; reduced copies, all, from the beautiful Flora Danica. But after giving two whole lovely long summer days, under the Giesbach, to the blue scabious, (' Devil's bit,') and getting in that time, only half-way up it, I gave in ; and must leave the work to happier and younger souls.

25. For these flowering stems, therefore, possessing nearly all the complex organization of a tree, but not its permanence, we will keep the word 'virga ;' and 'virgula' for those that have no leaves. I believe, when we come to the study of leaf-order, it will be best to begin with these annual virgæ, in which the leaf has nothing to do with preparation for a next year's branch. And now the remaining terms commonly applied to stems may be for the most part dispensed with ; but several are interesting, and must be examined before dismissal.

26. Indeed, in the first place, the word we have to use so often, 'stalk,' has not been got to the roots of, yet. It comes from the Greek *στέλεχος*, (*stelechos*,) the 'holding part' of a tree, that which is like a handle to all its branches ; 'stock' is another form in which it has come down to us : with some notion of its being the mother of branches : thus, when Athena's olive was burnt by the Persians, two days after, a shoot a cubit long had sprung from the 'stelechos,' of it.

27. Secondly. Few words are more interesting to the modern scholarly and professorial mind than 'stipend.' (I have twice a year at present to consider whether I am worth mine, sent with compliments from the Curators of the University chest).—Now, this word comes from 'stips,' small pay, which itself comes from 'stipo,' to press together, with the idea of small coin heaped up in little towers or piles. But with the idea of lateral pressing together, instead of downward, we get 'stipes,' a solid log ; in Greek, with the same sense, *στύπος*, (*stupos*,) whence, gradually, with help from another word meaning to beat, (and a side-glance at beating of hemp,) we get our 'stupid,' the German stumph, the Scottish sumph, and the plain English 'stump.'

Refining on the more delicate sound of stipes, the Latins

got 'stipula,' the thin stem of straw : which rustles and ripples daintily in verse, associated with spica and spiculum, used of the sharp pointed ear of corn, and its fine processes of fairy shafts.

28. There are yet two more names of stalk to be studied, though, except for particular plants, not needing to be used,—namely, the Latin *cau-dex*, and *cau-lis*, both connected with the Greek *καυλός*, properly meaning a solid stalk like a handle, passing into the sense of the hilt of a sword, or quill of a pen. Then, in Latin, *caudex* passes into the sense of log, and so, of cut plank or tablet of wood ; thus finally becoming the classical 'codex' of writings engraved on such wooden tablets, and therefore generally used for authoritative manuscripts.

Lastly, 'caulis,' retained accurately in our cauliflower, contracted in 'colewort,' and refined in 'kail,' softens itself into the French 'chou,' meaning properly the whole family of thick-stalked eatable salads with spreading heads ; but these being distinguished explicitly by Pliny as 'Capitati,' 'salads with a head,' or 'Captain salads,' the mediæval French softened the 'caulis capitatus' into 'chou cabus ;'—or, to separate the round or apple-like mass of leaves from the flowery foam, 'cabus' simply, by us at last enriched and emphasized into 'cabbage.'

29. I believe we have now got through the stiffest piece of etymology we shall have to master in the course of our botany ; but I am certain that young readers will find patient work, in this kind, well rewarded by the groups of connected thoughts which will thus attach themselves to familiar names ; and their grasp of every language they learn must only be esteemed by them secure when they recognize its derivatives in these homely associations, and are as much at ease with the Latin or French syllables of a word as with the English ones ; this familiarity being above all things needful to cure our young students of their present ludicrous impression that what is simple, in English, is knowing, in Greek ; and that terms constructed out of a dead language will explain difficulties which remained insoluble in a living one.

But Greek is *not* yet dead : while if we carry our unscholarly nomenclature much further, English soon will be ; and then doubtless botanical gentlemen at Athens will for some time think it fine to describe what we used to call caryophyllaceæ, as the ἐδληφιδες.

30. For indeed we are all of us yet but school-boys, clumsily using alike our lips and brains ; and with all our mastery of instruments and patience of attention, but few have reached, and those dimly, the first level of science,—wonder.

For the first instinct of the stem,—unnamed by us yet—unthought of,—the instinct of seeking light, as of the root to seek darkness,—what words can enough speak the wonder of it.

Look. Here is the little thing, Line-study V. (A), in its first birth to us : the stem of stems ; the one of which we pray that it may bear our daily bread. The seed has fallen in the ground with the springing germ of it downwards ; with heavenly cunning the taught stem curls round, and seeks the never-seen light. Veritable ‘conversion,’ miraculous, called of God. And here is the oat germ, (B)—after the wheat, most vital of divine gifts ; and assuredly, in days to come, fated to grow on many a naked rock in hitherto lifeless lands, over which the glancing sheaves of it will shake sweet treasure of innocent gold.

And who shall tell us how they grow ; and the fashion of their rustling pillars—bent, and again erect, at every breeze. Fluted shaft or clustered pier, how poor of art, beside this grass-shaft—built, first to sustain the food of men, then to be strewn under their feet !

We must not stay to think of it, yet, or we shall get no farther till harvest has come and gone again. And having our names of stems now determined enough, we must in next chapter try a little to understand the different kinds of them.

The following notes, among many kindly sent me on the subject of Scottish Heraldry, seem to be the most trustworthy :

“The earliest known mention of the thistle as the national badge of Scotland is in the inventory of the effects of James III., who probably adopted it as an appropriate illustration of the royal motto, *In defence*.

"Thistles occur on the coins of James IV., Mary, James V., and James VI.; and on those of James VI. they are for the first time accompanied by the motto, *Nemo me impune lacessit*.

"A collar of thistles appears on the gold bonnet-pieces of James V. of 1539; and the royal ensigns, as depicted in Sir David Lindsay's armorial register of 1542, are surrounded by a collar formed entirely of golden thistles, with an oval badge attached.

"This collar, however, was a mere device until the institution, or, as it is generally but inaccurately called, the revival, of the order of the Thistle by James VII. (II. of England), which took place on May 29, 1687."

Date of James III.'s reign 1460—1488.

CHAPTER IX.

OUTSIDE AND IN.

1. THE elementary study of methods of growth, given in the following chapter, has been many years written, (the greater part soon after the fourth volume of 'Modern Painters'); and ought now to be rewritten entirely; but having no time to do this, I leave it with only a word or two of modification, because some truth and clearness of incipient notion will be conveyed by it to young readers, from which I can afterwards lop the errors, and into which I can graft the finer facts, better than if I had a less blunt embryo to begin with.

2. A stem, then, broadly speaking, (I had thus began the old chapter,) is the channel of communication between the leaf and root; and if the leaf can grow directly from the root there is no stem: so that it is well first to conceive of all plants as consisting of leaves and roots only, with the condition that each leaf must have its own quite particular root* somewhere.

Let a b c, Fig. 16, be three leaves, each, as you see, with its own root, and by no means dependent on other leaves for its

* Recent botanical research makes this statement more than dubitable. Nevertheless, on no other supposition can the forms and action of tree-branches, so far as at present known to me, be yet clearly accounted for.

daily bread ; and let the horizontal line be the surface of the ground. Then the plant has no stem, or an underground one. But if the three leaves rise above the ground, as in Fig. 17, they must reach their roots by elongating their stalks, and this elongation is the stem of the plant. If the outside leaves grow last, and are therefore youngest, the plant is said to grow from the outside. You know that 'ex' means out, and that 'gen' is the first syllable of Genesis (or creation), therefore the old botanists, putting an o between the two syllables, called the plants whose outside leaves grew last, Ex-o-gens. If the inside leaf grows last, and is youngest, the plant was said to grow from the inside, and from the Greek Endon, within, called an 'Endo-gen.' If these names are persisted in, the

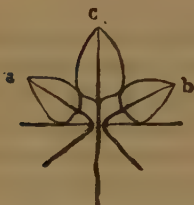


FIG. 16.



FIG. 17.

Greek botanists, to return the compliment, will of course call Endogens *Ἰνσείδβορνίδες*, and Exogens *Ἐνσείδβορνίδες*. In the Oxford school, they will be called simply Inlaid and Outlaid.

3. You see that if the outside leaves are to grow last, they may conveniently grow two at a time ; which they accordingly do, and exogens always start with two little leaves from their roots, and may therefore conveniently be called two-leaved ; which, if you please, we will for our parts call them. The botanists call them 'two-suckered,' and can't be content to call them *that* in English ; but drag in a long Greek word, meaning the fleshy sucker of the sea-devil,—'cotyledon,' which, however, I find is practically getting shortened into 'cot,' and that they will have to end by calling endogens, monocots, and

exogens, bicots. I mean steadily to call them one-leaved and two-leaved, for this further reason, that they differ not merely in the single or dual springing of first leaves from the seed ; but in the distinctly single or dual arrangement of leaves afterwards on the stem ; so that, through all the complexity obtained by alternate and spiral placing, every bicot or two-leaved flower or tree is in reality composed of dual groups of leaves, separated by a given length of stem ; as, most characteristically in this pure mountain type of the Ragged Robin (*Clarissa laciniosa*), Fig. 18 ; and compare A, and B, Lines-tudy II. ; while, on the other hand, the monocot plants are by close analysis, I think, always resolvable into successively climbing leaves, sessile on one another, and sending their roots, or processes, for nourishment, down through one another, as in Fig. 19.

4. Not that I am yet clear, at all, myself ; but I do think it's more the botanists' fault than mine, what 'cotyledonous' structure there may be at the outer base of each successive bud ; and still less, how the intervenient length of stem, in the bicots, is related to their power, or law, of branching. For not only the two-leaved tree is outlaid, and the one-leaved inlaid, but the two-leaved tree is branched, and the one-leaved tree is not branched. This is a most vital and important distinction, which I state to you in very bold terms, for though there are some apparent exceptions to the law, there are, I believe, no real ones, if we define a branch rightly. Thus, the head of a palm tree is merely a cluster of large leaves ; and the spike of a grass, a clustered blossom. The stem, in both, is unbranched ; and we should be able in this respect to classify plants very simply in-

deed, but for a provoking species of intermediate creatures whose branching is always in the manner of corals, or sponges, or arborescent minerals, irregular and accidental,



FIG. 18.



FIG. 19.

and essentially, therefore, distinguished from the systematic anatomy of a truly branched tree. Of these presently; we must go on by very short steps: and I find no step can be taken without check from existing generalizations. Sowerby's definition of Monocotyledons, in his ninth volume, begins thus: "Herbs, (or rarely, and only in exotic genera,) trees, in which the wood, pith, and bark are indistinguishable." Now if there be one plant more than another in which the pith is defined, it is the common Rush; while the nobler families of true herbs derive their principal character from being pithless altogether! We cannot advance too slowly.

5. In the families of one-leaved plants in which the young leaves grow directly out of the old ones, it becomes a grave question for them whether the old ones are to lie flat or edgeways, and whether they must therefore grow out of their faces or their edges. And we must at once understand the way they contrive it, in either case.



FIG. 20.

Among the many forms taken by the Arethusan leaf, one of the commonest is long and gradually tapering,—much broader at the base than the point. We will take such an one for examination, and suppose that it is growing on the ground as in Fig. 20, with a root to its every fibre. Cut out a piece of strong paper roughly into the shape of this Arethusan leaf, a, Fig. 21. Now suppose the next young leaf has to spring out of the front of this one, at about the middle of its height. Give it two nicks with the scissors at b b; then roll up the lower part into a cylinder, (it will overlap a good deal at the bottom,) and tie it fast with a fine thread: so, you will get the form at c. Then bend the top of it back, so that, seen sideways, it appears as at d, and you see you have made quite a little flower-pot to plant your new leaf in, and perhaps it may occur to you that you have seen something like this before. Now make another, a little less wide, but with the part for the cylinder twice as long, roll it up in the same way, and slip it inside the other,

with the flat part turned the other way, e. Surely this reminds you now of something you have seen? Or must I draw the something (Fig. 22)?

6. All grasses are thus constructed, and have their leaves set thus, opposite, on the sides of their tubular stems, alternately, as they ascend. But in most of them there is also a peculiar construction, by which, at the base of the sheath, or enclosing tube, each leaf articulates itself with the rest of the stem at a ringed knot, or joint.

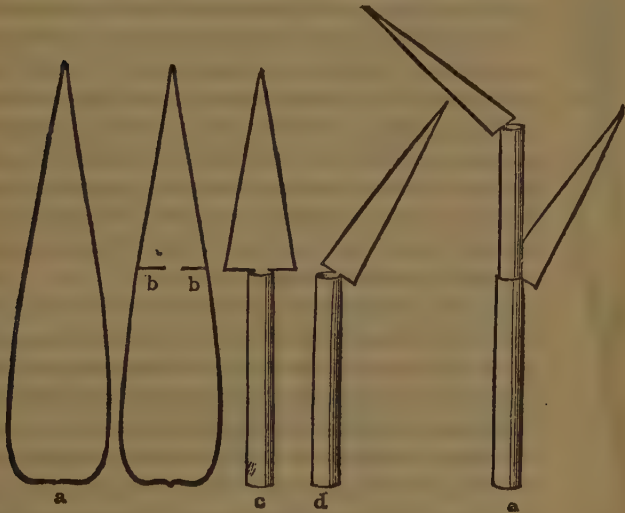


FIG. 21.

Before examining these, remember there are mainly two sorts of joints in the framework of the bodies of animals. One is that in which the bone is thick at the joints and thin between them, (see the bone of the next chicken leg you eat), the other is that of animals that have shells or horny coats, in which characteristically the shell is thin at the joints, and thick between them (look at the next lobster's claw you can see, without eating). You know, also, that though the crustaceous are titled only from their crusts, the name 'insect'

is given to the whole insect tribe, because they are farther jointed almost into sections: it is easily remembered, also, that the projecting joint means strength and elasticity in the creature, and that all its limbs are useful to it, and cannot conveniently be parted with; and that the incised, sectional, or insectile joint means more or less weakness,* and necklace-like laxity or license in the creature's make; and an ignoble power of shaking off its legs or arms on occasion, coupled also with modes of growth involving occasionally quite astonishing transformations, and beginnings of new life under new circumstances; so that, until very lately, no mortal knew what a crab was like in its youth, the very existence of the creature, as well as its legs, being jointed, as it were, and made in separate pieces with the narrowest possible thread of connection between them; and its principal, or stomachic, period of life, connected with its sentimental period by as thin a thread as a wasp's stomach is with its thorax.



FIG. 22.

7. Now in plants, as in animals, there are just the same opposed aspects of joint, with this speciality of difference in function, that the animal's limb bends at the joints, but the vegetable limb stiffens. And when the articulation projects, as in the joint of a cane, it means not only that the strength of the plant is well carried through the junction, but is carried farther and more safely than it could be without it: a cane is stronger, and can stand higher than it could otherwise, because of its joints. Also, this structure implies that the plant has a will of its own, and a position which on the whole it will keep, however it may now and then be bent out of it; and that it has a continual battle, of a healthy and humanlike kind, to wage with surrounding elements.

* Not always in muscular power; but the framework on which strong muscles are to act, as that of an insect's wing, or its jaw, is never insectile.

But the crabby, or insect-like, joint, which you get in seaweeds and cacti, means either that the plant is to be dragged and wagged here and there at the will of waves, and to have no spring nor mind of its own ; or else that it has at least no springy intention and elasticity of purpose, but only a knobby, knotty, prickly, malignant stubbornness, and incoherent opinionativeness ; crawling about, and cogging, and grovelling, and aggregating anyhow, like the minds of so many people whom one knows !

8. Returning then to our grasses, in which the real rooting and junction of the leaves with each other is at these joints ; we find that therefore every leaf of grass may be thought of as consisting of two main parts, for which we shall want two separate names. The lowest part, which wraps itself round to become strong, we will call the 'staff,' and for the free-floating outer part we will take specially the name given at present carelessly to a large number of the plants themselves, 'flag.' This will give a more clear meaning to the words 'rod' (*virga*), and 'staff' (*baculus*), when they occur together, as in the 23rd Psalm ; and remember the distinction is that a rod bends like a switch, but a staff is stiff. I keep the well-known name 'blade' for grass-leaves in their fresh green state.

9. You felt, as you were bending down the paper into the form d, Fig. 21, the difficulty and awkwardness of the transition from the tubular form of the staff to the flat one of the flag. The mode in which this change is effected is one of the most interesting features in plants, for you will find presently that the leaf-stalk in ordinary leaves is only a means of accomplishing the same change from round to flat. But you know I said just now that some leaves were not flat, but set upright, edgeways. It is not a common position in two-leaved trees ; but if you can run out and look at an *arbor vitæ*, it may interest you to see its hatchet-shaped vertically crested cluster of leaves transforming themselves gradually downwards into branches ; and in one-leaved trees the vertically edged group is of great importance.

10. Cut out another piece of paper like a in Fig. 21, but

now, instead of merely giving it nicks at a, b, cut it into the shape A, Fig. 23. Roll the lower part up as before, but instead of pulling the upper part down, pinch its back at the dotted line, and bring the two points, a and b, forward, so that they may touch each other. B shows the look of the thing half-done, before the points a and b have quite met. Pinch them close, and stitch the two edges neatly together, all the way from a to the point c; then roll and tie up the

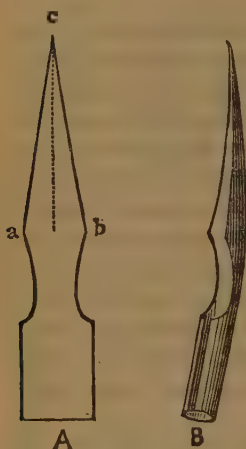


FIG. 23.

lower part as before. You will find then that the back or spinal line of the whole leaf is bent forward, as at B. Now go out to the garden and gather the green leaf of a fleur-de-lys, and look at it and your piece of disciplined paper together; and I fancy you will probably find out several things for yourself that I want you to know.

11. You see, for one thing, at once, how *strong* the fleur-de-lys leaf is, and that it is just twice as strong as a blade of grass, for it is the substance of the staff, with its sides flattened together, while the grass blade is a staff cut open and flattened out. And you see that as a grass blade necessarily flaps down, the fleur-de-lys leaf as necessarily curves up, owing to that inevitable bend in its back. And you see, with its keen edge, and long curve, and sharp point, how like a sword it is. The botanists would for once have given a really good and right name to the plants which have this kind of leaf, 'Ensatæ,' from the Latin 'ensis,' a sword; if only sata had been properly formed from sis. We can't let the rude Latin stand, but you may remember that the fleur-de-lys, which is the flower of chivalry, has a sword for its leaf, and a lily for its heart.

12. In case you cannot gather a fleur-de-lys leaf, I have drawn for you, in Plate VI., a cluster of such leaves, which are as pretty as any, and so small that, missing the points of a

few, I can draw them of their actual size. You see the pretty alternate interlacing at the bottom, and if you can draw at all, and will try to outline their curves, you will find what subtle lines they are. I did not know this name for the strong-edged grass leaves when I wrote the pieces about shield and sword leaves in 'Modern Painters'; I wish I had chanced in those passages on some other similitude, but I can't alter them now, and my trustful pupils may avoid all confusion of thought by putting *gladius* for *ensis*, and translating it by the word 'scymitar,' which is also more accurate in expressing the curvature blade. So we will call the *ensatæ*, instead, 'gladiolæ,' translating, 'scymitar-grasses.' And having now got at some clear idea of the distinction between outlaid and inlaid growth in the stem, the reader will find the elementary analysis of forms resulting from outlaid growth in 'Modern Painters'; and I mean to republish it in the sequel of this book, but must go on to other matters here. The growth of the inlaid stem we will follow as far as we need, for English plants, in examining the grasses.

FLORENCE, 11th September, 1874.

As I correct this chapter for press, I find it is too imperfect to be let go without a word or two more. In the first place, I have not enough, in distinguishing the nature of the living yearly shoot, with its cluster of fresh leafage, from that of the accumulated mass of perennial trees, taken notice of the similar power even of the annual shoot, to obtain some manner of immortality for itself, or at least of usefulness, *after* death. A Tuscan woman stopped me on the path up to Fiesole last night, to beg me to buy her plaited straw. I wonder how long straw lasts, if one takes care of it? A Leghorn bonnet, (if now such things are,) carefully put away,—even properly taken care of when it is worn,—how long will it last, young ladies?

I have just been reading the fifth chapter of II. Esdras, and am fain to say, with less discomfort than otherwise I might have felt, (the example being set me by the archangel Uriel,) "I am not sent to tell thee, for I do not know." How old is

the oldest straw known? the oldest linen? the oldest hemp? We have mummy wheat,—cloth of papyrus, which is a kind of straw. The paper reeds by the brooks, the flax-flower in the field, leave such imperishable frame behind them. And Ponte-della-Paglia, in Venice; and Straw Street, of Paris, remembered in Heaven,—there is no occasion to change their names, as one may have to change ‘Waterloo Bridge,’ or the ‘Rue de l’Impératrice.’ Poor Empress! Had she but known that her true dominion was in the straw streets of her fields; not in the stone streets of her cities!

But think how wonderful this imperishableness of the stem of many plants is, even in their annual work: how much more in their perennial work! The noble stability between death and life, of a piece of perfect wood? It cannot grow, but will not decay; keeps record of its years of life, but surrenders them to become a constantly serviceable thing: which may be sailed in, on the sea, built with, on the land, carved by Donatello, painted on by Fra Angelico. And it is not the wood’s fault, but the fault of Florence in not taking proper care of it, that the panel of Sandro Botticelli’s loveliest picture has cracked, (not with heat, I believe, but blighting frost), a quarter of an inch wide through the Madonna’s face.

But what is this strange state of undecaying wood? What sort of latent life has it, which it only finally parts with when it rots?

Nay, what is the law by which its natural life is measured? What makes a tree ‘old’? One sees the Spanish-chestnut trunks among the Apennines growing into caves, instead of logs. Vast hollows, confused among the recessed darknesses of the marble crags, surrounded by mere laths of living stem, each with its coronal of glorious green leaves. Why can’t the tree go on, and on,—hollowing itself into a Fairy—no—a Dryad, Ring,—till it becomes a perfect Stonehenge of a tree? Truly “I am not sent to tell thee, for I do not know.”

The worst of it is, however, that I don’t know one thing which I ought very thoroughly to have known at least thirty years ago, namely, the true difference in the way of building the trunk in outlaid and inlaid wood. I have an idea that the

stem of a palm-tree is only a heap of leaf-roots built up like a tower of bricks, year by year, and that the palm-tree really grows on the top of it, like a bunch of fern; but I've no books here, and no time to read them if I had. If only I were a stronge giant, instead of a thin old gentleman of fifty-five, how I should like to pull up one of those little palm-trees by the roots—(by the way, what are the roots of a palm like? and, how does it stand in sand, where it is wanted to stand, mostly? Fancy, not knowing that, at fifty-five!)—that grow all along the Riviera; and snap its stem in two, and cut it down the middle. But I suppose there are sections enough now in our grand botanical collections, and you can find it all out for yourself. That you should be able to ask a question clearly, is two-thirds of the way to getting it answered; and I think this chapter of mine will at least enable you to ask some questions about the stem, though what a stem *is*, truly, “I am not sent to tell thee, for I do not know.”

KNARESBOROUGH, 30th April, 1876.

I see by the date of last paragraph that this chapter has been in my good Aylesbury printer's type for more than a year and a half. At this rate, Proserpina has a distant chance of being finished in the spirit-land, with more accurate information derived from the archangel Uriel himself, (not that he is likely to know much about the matter, if he keeps on letting himself be prevented from ever seeing foliage in spring-time by the black demon-winds,) about the year 2000. In the meantime, feeling that perhaps I *am* sent to tell my readers a little more than is above told, I have had recourse to my botanical friend, good Mr. Oliver of Kew, who has taught me, first, of palms, that they actually stitch themselves into the ground, with a long dipping loop, up and down, of the root fibres, concerning which sempstress work I shall have a month's puzzlement before I can report on it; secondly, that all the increment of tree stem is, by division and multiplication of the cells of the wood, a process not in the least to be described as ‘sending down roots from the leaf to the ground.’ I suspected as much in beginning to revise this chapter; but

hold to my judgment in not cancelling it. For this multiplication of the cells is at least compelled by an influence which passes from the leaf to the ground, and vice versâ ; and which is at present best conceivable to me by imagining the continual and invisible descent of lightning from electric cloud by a conducting rod, endowed with the power of softly splitting the rod into two rods, each as thick as the original one. Studying microscopically, we should then see the molecules of copper, as we see the cells of the wood, dividing and increasing, each one of them into two. But the visible result, and mechanical conditions of growth, would still be the same as if the leaf actually sent down a new root fibre ; and, more than this, the currents of accumulating substance, marked by the grain of the wood, are, I think, quite plainly and absolutely those of streams flowing only from the leaves downwards ; never from the root up, nor of mere lateral increase. I must look over all my drawings again, and at tree stems again, with more separate study of the bark and pith in those museum sections, before I can assert this ; but there will be no real difficulty in the investigation. If the increase of the wood is lateral only, the currents round the knots will be compressed at the sides, and open above and below ; but if downwards, compressed above the knot and open below it. The nature of the force itself, and the manner of its ordinances in direction, remain, and must for ever remain, inscrutable as our own passions, in the hand of the God of all Spirits, and of all Flesh.

“ Drunk is each ridge, of thy cup drinking,
 Each clod relenteth at thy dressing,
 Thy cloud-borne waters inly sinking,
 Fair spring sproutes forth, blest with thy blessing ;
 The fertile year is with thy bounty crowned,
 And where thou go'st, thy goings fat the ground.

Plenty bedews the desert p'aces,
 A hedge of mirth the hills encloseth,
 The fields with flockes have hid their faces,
 A robe of corn the valleys clotheth.
 Deserts and hills and fields and valleys all,
 Rejoice, shout, sing, and on thy name do call.”

CHAPTER X.

THE BARK.

1. PHILOLOGISTS are continually collecting instances, like our friend the French critic of Virgil, of the beauty of finished language, or the origin of unfinished, in the imitation of natural sounds. But such collections give an entirely false idea of the real power of language, unless they are balanced by an opponent list of the words which signally fail of any such imitative virtue, and whose sound, if one dwelt upon it, is destructive of their meaning.

2. For instance. Few sounds are more distinct in their kind, or one would think more likely to be vocally reproduced in the word which signified them, than that of a swift rent in strongly woven cloth; and the English words 'rag' and ragged, with the Greek *ρήγνυμι*, do indeed in a measure recall the tormenting effect upon the ear. But it is curious that the verb which is meant to express the actual origination of rags, should rhyme with two words entirely musical and peaceful—words, indeed, which I always reserve for final resource in passages which I want to be soothing as well as pretty,—'fair,' and 'air;' while, in its orthography, it is identical with the word representing the bodily sign of tenderest passion, and grouped with a multitude of others,* in which the mere insertion of a consonant makes such wide difference of sentiment as between 'dear' and 'drear,' or 'pear' and 'spear.' The Greek root, on the other hand, has persisted in retaining some vestige of its excellent dissonance, even where it has parted with the last vestige of the idea it was meant to convey; and when Burns did his best,—and his best was above most men's

* It is one of the three cadences, (the others being of the words rhyming to 'mind' and 'way,') used by Sir Philip Sidney in his marvellous paraphrase of the 55th Psalm.

—to gather pleasant liquid and labial syllabing, round gentle meaning, in

“ Bonnie lassie, will ye go,
Will ye go, will ye go,
Bonnie lassie, will ye go,
To the birks of Aberfeldy ? ”

he certainly had little thought that the delicately crisp final *k*, in *birk*, was the remnant of a magnificent Greek effort to express the rending of the earth by earthquake, in the wars of the giants. In the middle of that word ‘*esmaragēse*,’ we get our own beggar’s ‘*rag*’ for a pure root, which afterwards, through the Latin *frango*, softens into our ‘*break*,’ and ‘*bark*,’—the ‘broken thing’; that idea of its rending around the tree’s stem having been, in the very earliest human efforts at botanical description, attached to it by the pure Aryan race, watching the strips of rosy satin break from the birch stems, in the Aberfeldys of Imaus.

3. That this tree should have been the only one which “the Aryans, coming as conquerors from the North, were able to recognize in Hindostan,”* and should therefore also be “the only one whose name is common to Sanskrit, and to the languages of Europe,” delighted me greatly, for two reasons: the first, for its proof that in spite of the development of species, the sweet gleaming of birch stem has never changed its argent and sable for any unchequered heraldry; and the second, that it gave proof of a much more important fact, the keenly accurate observation of Aryan foresters at that early date; for the fact is that the breaking of the thin-beaten silver of the birch trunk is so delicate, and its smoothness so graceful, that until I painted it with care, I was not altogether clear-headed myself about the way in which the chequering was done: nor until Fors to-day brought me to the house of one of my father’s friends at Carshalton, and gave me three birch stems to look at just outside the window, did I perceive it to be a primal question about them, what it is that blanches that dainty

* Lectures on the Families of Speech, by the Rev. F. Farrer, Longman, 1870. Page 81.

dress of theirs, or, anticipatorily, weaves. What difference is there between the making of the corky excrescence of other trees, and of this almost transparent fine white linen? I perceive that the older it is, within limits, the finer and whiter; hoary tissue, instead of hoary hair—honouring the tree's aged body: the outer sprays have no silvery light on their youth. Does the membrane thin itself into whiteness merely by stretching, or produce an outer film of new substance? *

4. And secondly, this investiture, why is it transverse to the trunk,—swathing it, as it were, in bands? Above all,—when it breaks,—why does it break round the tree instead of down? All other bark breaks as anything would, naturally, round a swelling rod, but this, as if the stem were growing longer; until, indeed, it reaches farthest heroic old age, when the whiteness passes away again, and the rending is like that of other trees, downwards. So that, as it were in a changing language, we have the great botanical fact twice taught us, by this tree of Eden, that the skins of trees differ from the skins of the higher animals in that, for the most part, they won't stretch, and must be worn torn.

So that in fact the most popular arrangement of vegetative adult costume is Irish; a normal investiture in honourable rags; and decorousness of tattering, as of a banner borne in splendid ruin through storms of war.

5. Now therefore, if we think of it, we have five distinct orders of investiture for organic creatures; first, mere secretion of mineral substance, chiefly lime, into a hard shell, which, if broken, can only be mended, like china—by sticking it together; secondly, organic substance of armour which grows into its proper shape at once for good and all, and can't be mended at all, if broken, (as of insects); thirdly, organic substance of skin, which stretches, as the creature grows, by cracking, over a fresh skin which is supplied beneath it, as in bark of trees; fourthly, organic substance of skin cracked symmetrically into plates or scales which can increase all

* I only profess, you will please to observe, to ask questions in *Proserpina*. Never to answer any. But of course this chapter is to introduce some further inquiry in another place.

round their edges, and are connected by softer skin, below, as in fish and reptiles, (divided with exquisite lustre and flexibility, in feathers of birds) ; and lastly, true elastic skin, extended in soft unison with the creature's growth,—blushing with its blood, fading with its fear ; breathing with its breath, and guarding its life with sentinel beneficence of pain.

6. It is notable, in this higher and lower range of organic beauty, that the decoration, by pattern and colour, which is almost universal in the protective coverings of the middle ranks of animals, should be reserved in vegetables for the most living part of them, the flower only : and that among animals, few but the malignant and senseless are permitted, in the corrugation of their armour, to resemble the half-dead trunk of the tree, as they float beside it in the tropical river. I must, however, leave the scale patterns of the palms and other inlaid tropical stems for after-examination,—content, at present, with the general idea of the bark of an outlaid tree as the successive accumulation of the annual protecting film, rent into ravines of slowly increasing depth, and coloured, like the rock, whose stability it begins to emulate, with the grey or gold of clinging lichen and embroidering moss.

CHAPTER XL

GENEALOGY.

1. RETURNING, after more than a year's sorrowful interval, to my Sicilian fields,—not incognisant, now, of some of the darker realms of Proserpina ; and with feebler heart, and, it may be, feebler wits, for wandering in her brighter ones,—I find what I had written by way of sequel to the last chapter somewhat difficult, and extremely tiresome. Not the less, after giving fair notice of the difficulty, and asking due pardon for the tiresomeness, I am minded to let it stand ; trusting to end, with it, once for all, investigations of the kind. But in finishing this first volume of my School Botany, I must try to give the reader some notion of the plan of the book, as it



PLATE VI.—RADICAL INSERTION OF LEAVES OF ENSATÆ.

IRIS GERMANICA.

now, during the time for thinking over it which illness left me, has got itself arranged in my mind, within limits of possible execution. And this the rather, because I wish also to state, somewhat more gravely than I have yet done, the grounds on which I venture here to reject many of the received names of plants; and to substitute others for them, relating to entirely different attributes from those on which their present nomenclature is confusedly edified.

I have already in some measure given the reasons for this change;* but I feel that, for the sake of those among my scholars who have laboriously learned the accepted names, I ought now also to explain its method more completely.

2. I call the present system of nomenclature *confusedly* edified, because it introduces,—without, apparently, any consciousness of the inconsistency, and certainly with no apology for it,—names founded sometimes on the history of plants, sometimes on their qualities, sometimes on their forms, sometimes on their products, and sometimes on their poetical associations.

On their history—as ‘Gentian’ from King Gentius, and Funkia from Dr. Funk.

On their qualities—as ‘Scrophularia’ from its (quite uncertified) use in scrofula.

On their forms—as the ‘Caryophylls’ from having petals like husks of nuts.

On their products—as ‘Cocos nucifera’ from its nuts.

And on their poetical associations,—as the Star of Bethlehem from its imagined resemblance to the light of that seen by the Magi.

3. Now, this variety of grounds for nomenclature might patiently, and even with advantage, be permitted, provided the grounds themselves were separately firm, and the inconsistency of method advisedly allowed, and, in each case, justified. If the histories of King Gentius and Dr. Funk are indeed important branches of human knowledge;—if the Scrophulariaceæ do indeed cure King’s Evil;—if pinks be best described in their likeness to nuts;—and the Star of

* See Introduction, pp. 9-12.

Bethlehem verily remind us of Christ's Nativity,—by all means let these and other such names be evermore retained. But if Dr. Funk be not a person in any special manner needing either stellification or florification; if neither herb nor flower can avail, more than the touch of monarchs, against hereditary pain; if it be no better account of a pink to say it is nut-leaved, than of a nut to say it is pink-leaved; and if the modern mind, incurious respecting the journeys of wise men, has already confused, in its Bradshaw's Bible, the station of Bethlehem with that of Bethel,* it is certainly time to take some order with the partly false, partly useless, and partly forgotten literature of the Fields; and, before we bow our children's memories to the burden of it, ensure that there shall be matter worth carriage in the load.

4. And farther, in attempting such a change, we must be clear in our own minds whether we wish our nomenclature to tell us something about the plant itself, or only to tell us the place it holds in relation to other plants: as; for instance, in the Herb-Robert, would it be well to christen it, shortly, 'Rob Roy,' because it is pre-eminently red, and so have done with it;—or rather to dwell on its family connections, and call it 'Macgregoraceous'?

5. Before we can wisely decide this point, we must resolve whether our botany is intended mainly to be useful to the vulgar, or satisfactory to the scientific élite. For if we give names characterizing individuals, the circle of plants which any country possesses may be easily made known to the children who live in it: but if we give names founded on the connexion between these and others at the Antipodes, the parish school-master will certainly have double work; and it may be doubted greatly whether the parish school-boy, at the end of the lecture, will have half as many ideas.

6. Nevertheless, when the features of any great order of plants are constant, and, on the whole, represented with great clearness both in cold and warm climates, it may be desirable to express this their citizenship of the world in definite nomenclature. But my own method, so far as hitherto developed,

* See Sowerby's nomenclature of the flower, vol. ix., plate 1703.



PLATE VII.—*CONTORTA PURPUREA*. PURPLE WREATH-WORT.

consists essentially in fastening the thoughts of the pupil on the special character of the plant, in the place where he is likely to see it; and therefore, in expressing the power of its race and order in the wider world, rather by reference to mythological associations than to botanical structure.

7. For instance, Plate VII. represents, of its real size, an ordinary spring flower in our English mountain fields. It is an average example,—not one of rare size under rare conditions,—rather smaller than the average, indeed, that I might get it well into my plate. It is one of the flowers whose names I think good to change; but I look carefully through the existing titles belonging to it and its fellows, that I may keep all I expediently can. I find, in the first place, that Linnæus called one group of its relations, Ophryds, from Ophrys,—Greek for the eyebrow,—on account of their resemblance to the brow of an animal frowning, or to the overshadowing casque of a helmet. I perceive this to be really a very general aspect of the flower; and therefore, no less than in respect to Linnæus, I adopt this for the total name of the order, and call them ‘Ophrydæ,’ or, shortly, ‘Ophryds.’

8. Secondly: so far as I know these flowers myself, I perceive them to fall practically into three divisions,—one, growing in English meadows and Alpine pastures, and always adding to their beauty; another, growing in all sorts of places, very ugly itself, and adding to the ugliness of its indiscriminated haunts; and a third, growing mostly up in the air, with as little root as possible, and of gracefully fantastic forms, such as this kind of nativity and habitation might presuppose. For the present, I am satisfied to give names to these three groups only. There may be plenty of others which I do not know, and which other people may name, according to their knowledge. But in all these three kinds known to me, I perceive one constant characteristic to be *some manner of distortion*; and I desire that fact,—marking a spiritual (in my sense of the word) character of extreme mystery,—to be the first enforced on the mind of the young learner. It is exhibited to the English child, primarily, in the form of the stalk of each

flower, attaching it to the central virga. This stalk is always twisted once and a half round, as if somebody had been trying to wring the blossom off; and the name of the family, in Proserpina, will therefore be 'Contorta'* in Latin, and 'Wreathewort' in English.

Farther: the beautiful power of the one I have drawn in its spring life, is in the opposition of its dark purple to the primrose in England, and the pale yellow anemone in the Alps. And its individual name will be, therefore, 'Contorta purpurea'—*Purple Wreathewort*.

And in drawing it, I take care to dwell on this strength of its colour, and to show thoroughly that it is a *dark* blossom,† before I trouble myself about its minor characters.

9. The second group of this kind of flowers live, as I said, in all sorts of places; but mostly, I think, in disagreeable ones,—torn and irregular ground, under alternations of unwholesome heat and shade, and among swarms of nasty insects. I cannot yet venture on any bold general statement about them, but I think that is mostly their way; and at all events, they themselves are in the habit of dressing in livid and unpleasant colours; and are distinguished from all other flowers by twisting, not only their stalks, but one of their petals, not once and a half only, but two or three times round, and putting it far out at the same time, as a foul jester would put out his tongue: while also the singular power of grotesque mimicry, which, though strong also in the other groups of their race, seems in the others more or less playful, is, in these, definitely degraded, and, in aspect, malicious.

10. Now I find the Latin name 'Satyrium' attached already to one sort of these flowers; and we cannot possibly have a better one for all of them. It is true that, in its first Greek form, Dioscorides attaches it to a white, not a livid, flower; and I dare say there are some white ones of the breed: but, in its full sense, the term is exactly right for the entire group

* Linnæus used this term for the oleanders; but evidently with less accuracy than usual.

† "ἄνθη πορφυροειδῆ" says Dioscorides, of the race generally,—but "ἄνθη δὲ ὑποπόρφυρα" of this particular one.

of ugly blossoms of which the characteristic is the spiral curve and protraction of their central petal: and every other form of Satyric ugliness which I find among the Ophryds, whatever its colour, will be grouped with them. And I make them central, because this humour runs through the whole order, and is, indeed, their distinguishing sign.

11. Then the third group, living actually in the air, and only holding fast by, without nourishing itself from, the ground, rock, or tree-trunk on which it is rooted, may of course most naturally and accurately be called 'Aeria,' as it has long been popularly known in English by the name of Air-plant.

Thus we have one general name for all these creatures, 'Ophryd'; and three family or group names, Contorta, Satyrium, and Aeria,—every one of these titles containing as much accurate fact about the thing named as I can possibly get packed into their syllables; and I will trouble my young readers with no more divisions of the order. And if their parents, tutors, or governors, after this fair warning, choose to make them learn, instead, the seventy-seven different names with which botanist-heraldries have beautifully ennobled the family,—all I can say is, let them at least begin by learning them themselves. They will be found in due order in pages 1084, 1085 of Loudon's Cyclopædia.*

12. But now, farther: the student will observe that the name of the total order is Greek; while the three family are ones Latin, although the central one is originally Greek also.

I adopt this as far as possible for a law through my whole plant nomenclature.

* I offer a sample of two dozen for good papas and mammas to begin with:—

Angraecum.	Corallorrhiza.	Ornithidium.	Prescotia.
Anisopetalum.	Cryptarrhena.	Ornithocephalus.	Renanthera.
Brassavola.	Eulophia.	Platanthera.	Rodriguezia.
Brassia.	Gymnadenia.	Pleurothallis.	Stenorhyncus.
Caelogyne.	Microstylis.	Pogonia.	Trizeuxis.
Calopogon.	Octomeria.	Polystachya.	Xylobium.

13. Farther: the terminations of the Latin family names will be, for the most part, of the masculine, feminine, and neuter forms, *us*, *a*, *um*, with these following attached conditions.

(I.) Those terminating in '*us*,' though often of feminine words, as the central *Arbor*, will indicate either real masculine strength (*quercus*, *laurus*), or conditions of dominant majesty (*cedrus*), of stubbornness and enduring force (*crataegus*), or of peasant-like commonalty and hardship (*juncus*); softened, as it may sometimes happen, into gentleness and beneficence (*thymus*). The occasional forms in '*er*' and '*il*' will have similar power (*acer*, *basil*).

(II.) Names with the feminine termination '*a*,' if they are real names of girls, will always mean flowers that are perfectly pretty and perfectly good (*Lucia*, *Viola*, *Margarita*, *Clarissa*). Names terminating in '*a*' which are not also accepted names of girls, may sometimes be none the less honourable, (*Primula*, *Campanula*,) but for the most part will signify either plants that are only good and worthy in a nursery sort of way, (*Salvia*,) or that are good without being pretty, (*Lavandula*,) or pretty without being good, (*Kalmia*). But no name terminating in '*a*' will be attached to a plant that is neither good nor pretty.

(III.) The neuter names terminating in '*um*' will always indicate some power either of active or suggestive evil, (*Conium*, *Solanum*, *Satyrium*,) or a relation, more or less definite, to death; but this relation to death may sometimes be noble, or pathetic,—“which to-day is, and to-morrow is cast into the oven,”—*Lilium*.

But the leading position of these neuters in the plant's double name must be noticed by students unacquainted with Latin, in order to distinguish them from plural genitives, which will always, of course, be the second word, (*Francesca Fontium*, *Francesca of the Springs*.)

14. Names terminating in '*is*' and '*e*,' if definitely names of women, (*Iris*, *Amaryllis*, *Alcestis*, *Daphne*,) will always signify flowers of great beauty, and noble historic association. If not definitely names of women, they will yet indicate

some specialty of sensitiveness, or association with legend (Berberis, Clematis.) No neuters in 'e' will be admitted.

15. Participial terminations (Impatiens), with neuters in 'en' (Cyclamen), will always be descriptive of some special quality or form,—leaving it indeterminate if good or bad, until explained. It will be manifestly impossible to limit either these neuters, or the feminines in 'is' to Latin forms; but we shall always know by their termination that they cannot be generic names, if we are strict in forming these last on a given method.

16. How little method there is in our present formation of them, I am myself more and more surprised as I consider. A child is shown a rose, and told that he is to call every flower like that, 'Rosaceous';* he is next shown a lily, and told that he is to call every flower like that, 'Liliaceous';—so far well; but he is next shown a daisy, and is not at all allowed to call every flower like that 'Daisaceous,' but he must call it, like the fifth order of architecture, 'Composite'; and being next shown a pink, he is not allowed to call other pinks 'Pinkaceous,' but 'Nut-leafed'; and being next shown a pease-blossom, he is not allowed to call other pease-blossoms 'Peasaceous,' but, in a brilliant burst of botanical imagination, he is incited to call it by two names instead of one, 'Butterfly-aceous' from its flower, and 'Pod-aceous' from its seed;—the inconsistency of the terms thus enforced upon him being perfected in their inaccuracy, for a daisy is not one whit more composite than Queen of the meadow, or Jura Jacinth;† and 'legumen' is not Latin for a pod, but 'siliqua,'—so that no good scholar could remember Virgil's 'siliqua quassante legumen,' without overthrowing all his Pisan nomenclature.

17. Farther. If we ground our names of the higher orders on the distinctive characters of *form* in plants, these are so many, and so subtle, that we are at once involved in more investigations than a young learner has ever time to follow successfully, and they must be at all times liable to disloca-

* Compare Chapter V., § 7.

† "Jacinthus Juræ," changed from "Hyacinthus Comosus."

tions and rearrangements on the discovery of any new link in the infinitely entangled chain. But if we found our higher nomenclature at once on historic fact, and relative conditions of climate and character, rather than of form, we may at once distribute our flora into unalterable groups, to which we may add at our pleasure, but which will never need disturbance ; far less, reconstruction.

18. For instance,—and to begin,—it is an historical fact that for many centuries the English nation believed that the Founder of its religion, spiritually, by the mouth of the King who spake of all herbs, had likened himself to two flowers,—the Rose of Sharon, and Lily of the Valley. The fact of this belief is one of the most important in the history of England,—that is to say, of the mind or heart of England : and it is connected solemnly with the heart of Italy also, by the closing cantos of the *Paradiso*.

I think it well therefore that our two first generic, or at least commandant, names heading the out-laid and in-laid divisions of plants, should be of the rose and lily, with such meaning in them as may remind us of this fact in the history of human mind.

It is also historical that the personal appearing of this Master of our religion was spoken of by our chief religious teacher in these terms: “The Grace of God, that bringeth salvation, hath appeared unto all men.” And it is a constant fact that this ‘grace’ or ‘favor’ of God is spoken of as “giving us to eat of the Tree of Life.”

19. Now, comparing the botanical facts I have to express, with these historical ones, I find that the rose tribe has been formed among flowers, not in distant and monstrous geologic æras, but in the human epoch ;—that its ‘grace’ or favor has been in all countries so felt as to cause its acceptance everywhere for the most perfect physical type of womanhood ;—and that the characteristic fruit of the tribe is so sweet, that it has become symbolic at once of the subtlest temptation, and the kindest ministry to the earthly passion of the human race. “Comfort me with apples, for I am sick of love.”

20. Therefore I shall call the entire order of these flowers

'Charites,' (Graces), and there will be divided into these five genera, Rosa, Persica, Pomum, Rubra, and Fragaria. Which sequence of names I do not think the young learner will have difficulty in remembering; nor in understanding why I distinguish the central group by the fruit instead of the flower. And if he once clearly master the structure and relations of these five genera, he will have no difficulty in attaching to them, in a satellitic or subordinate manner, such inferior groups as that of the Silver-weed, or the Tormentilla; but all he will have to learn by heart and rote, will be these six names; the Greek Master-name, Charites, and the five generic names, in each case belonging to plants, as he will soon find, of extreme personal interest to him.

21. I have used the word 'Order' as the name of our widest groups, in preference to 'Class,' because these widest groups will not always include flowers like each other in form, or equal to each other in vegetative rank; but they will be 'Orders,' literally like those of any religious or chivalric association, having some common link rather intellectual than national,—the Charites, for instance, linked by their kindness,—the Oreiades, by their mountain seclusion, as Sisters of Charity or Monks of the Chartreuse, irrespective of ties of relationship. Then beneath these orders will come, what may be rightly called, either as above in Greek derivation, 'Genera,' or in Latin, 'Gentes,' for which, however, I choose the Latin word, because Genus is disagreeably liable to be confused on the ear with 'genius'; but Gens, never; and also 'nomen gentile' is a clearer and better expression than 'nomen generosum,' and I will not coin the barbarous one, 'Genericum.' The name of the Gens, (as 'Lucia,') with an attached epithet, as 'Verna,' will, in most cases, be enough to characterize the individual flower; but if farther subdivision be necessary, the third order will be that of Families, indicated by a 'nomen familiare' added in the third place of nomenclature, as Lucia Verna,—Borealis; and no farther subdivision will ever be admitted. I avoid the word 'species'—originally a bad one, and lately vulgarized beyond endurance—altogether. And varieties belonging to narrow locali-

ties, or induced by horticulture, may be named as they please by the people living near the spot, or by the gardener who grows them ; but will not be acknowledged by Proserpina. Nevertheless, the arbitrary reduction under Ordines, Gentes, and Familiæ, is always to be remembered as one of massive practical convenience only ; and the more subtle arborescence of the infinitely varying structures may be followed, like a human genealogy, as far as we please, afterwards ; when once we have got our common plants clearly arranged and intelligibly named.

22. But now we find ourselves in the presence of a new difficulty, the greatest we have to deal with in the whole matter.

One new nomenclature, to be thoroughly good, must be acceptable to scholars in the five great languages, Greek, Latin, French, Italian, and English ; and it must be acceptable by them in teaching the native children of each country. I shall not be satisfied, unless I can feel that the little maids who gather their first violets under the Acropolis rock, may receive for them Æschylean words again with joy. I shall not be content, unless the mothers watching their children at play in the Ceramicus of Paris, under the scarred ruins of her Kings' palace, may yet teach them there to know the flowers which the Maid of Orleans gathered at Domremy. I shall not be satisfied unless every word I ask from the lips of the children of Florence and Rome, may enable them better to praise the flowers that are chosen by the hand of Matilda,* and bloom around the tomb of Virgil.

23. Now in this first example of nomenclature, the Master-name, being *pure* Greek, may easily be accepted by Greek children, remembering that certain also of their own poets, if they did not call the flower a Grace itself, at least thought of it as giving gladness to the Three in their dances.† But for French children the word 'Grâce' has been doubly and trebly corrupted ; first, by entirely false theological scholarship,

* "Cantando, e scegliendo fior di fiore

Onde era picta tutta la sua via."—*Purg.*, xxviii. 35.

† "καὶ θεοῖσι τερπνὰ."

mistaking the 'Favor' or Grace done by God to good men, for the 'Misericordia,' or mercy, shown by Him to bad ones ; and so, in practical life, finally substituting 'Grâce' as a word of extreme and mortal prayer, for 'Merci,' and of late using 'Merci' in a totally ridiculous and perverted power, for the giving of thanks (or refusal of offered good) : while the literally derived word 'Charite' has become, in the modern mind, a gift, whether from God or man, only to the wretched, never to the happy : and lastly, 'Grâce' in its physical sense has been perverted, by their social vulgarity, into an idea, whether with respect to form or motion, commending itself rather to the ballet-master than either to the painter or the priest.

For these reasons, the Master name of this family, for my French pupils, must be simply 'Rhodiades,' which will bring, for them, the entire group of names into easily remembered symmetry ; and the English form of the same name, Rhodiad, is to be used by English scholars also for all tribes of this group except the five principal ones.

24. Farther, in every gens of plants, one will be chosen as the representative, which, if any, will be that examined and described in the course of this work, if I have opportunity of doing so.

This representative flower will always be a wild one, and of the simplest form which completely expresses the character of the plant ; existing divinely and unchangeably from age to age, ungrieved by man's neglect, and inflexible by his power.

And this divine character will be expressed by the epithet 'Sacred,' taking the sense in which we attach it to a dominant and christened majesty, when it belongs to the central type of any forceful order ;—'Quercus sacra,' 'Laurus sacra,' etc.,—the word 'Benedicta,' or 'Benedictus,' being used instead, if the plant be too humble to bear, without some discrepancy and unbecomingness, the higher title ; as 'Carduus Benedictus,' Holy Thistle.

25. Among the gentes of flowers bearing girls' names, the dominant one will be simply called the Queen, 'Rose Regina,' 'Rose the Queen' (the English wild rose) ; 'Clarissa Regina,' 'Clarissa the Queen' (Mountain Pink) ; 'Lucia Regina,'

'Lucy the Queen' (Spring Gentian), or in simpler English, 'Lucy of Teesdale,' as 'Harry of Monmouth.' The ruling flowers of groups which bear names not yet accepted for names of girls, will be called simply 'Domina,' or shortly 'Donna.' 'Rubra domina' (wild raspberry): the wild strawberry, because of her use in heraldry, will bear a name of her own, exceptional; 'Cora coronalis.'

26. These main points being understood, and concessions made, we may first arrange the greater orders of land plants in a group of twelve, easily remembered, and with very little forcing. There must be *some* forcing always to get things into quite easily tenable form, for Nature always has her ins and outs. But it is curious how fitly and frequently the number of twelve may be used for *memoria technica*; and in this instance the Greek derivative names fall at once into harmony with the most beautiful parts of Greek mythology, leading on to early Christian tradition.

27. Their series will be, therefore, as follows: the principal subordinate groups being at once placed under each of the great ones. The reasons for occasional appearance of inconsistency will be afterwards explained, and the English and French forms given in each case are the terms which would be used in answering the rapid question, 'Of what order is this flower?' the answer being, It is a 'Cyllenid,' a 'Pleiad,' or a 'Vestal,' as one would answer of a person, he is a Knight of St. John or Monk of St. Benedict; while to the question, of what gens, we answer, a Stella or an Erica, as one would answer of a person, a Stuart or Plantagenet.

I. CHARITES.

ENG. CHARIS. FR. RHODIADE.

Rosa. Persica. Pomum. Rubra. Fragaria.

II. URANIDES.

ENG. URANID. FR. URANIDE.

Lucia. Campanula. Convoluta.

III. CYLLENIDES.

ENG. CYLLENID. FR. NEPHELIDE.

Stella. Francesca. Primula.

IV. OREIADES.

ENG. OREIAD. FR. OREADE.

Erica. Myrtilla. Aurora.

V. PLEIADES.

ENG. PLEIAD. FR. PLEIADE.

Silvia. Anemone.

VI. ARTEMIDES.

ENG. ARTEMID. FR. ARTEMIDE.

Clarissa. Lychnis. Scintilla. Mica.

VII. VESTALES.

ENG. VESTAL. FR. VESTALE.

Mentha. Melitta. Basil. Salvia. Lavandula. Thymus.

VIII. CYTHERIDES.

ENG. CYTHERID. FR. CYTHERIDE.

Viola. Veronica. Giulietta.

IX. HELIADES.

ENG. ALCESTID. FR. HELIADE.

Clytia. Margarita. Alcectis. Falconia. Carduus.

X. DELPHIDES.

ENG. DELPHID. FR. DELPHIDE.

Laurus. Granata. Myrtus.

XI. HESPERIDES.

ENG. HESPERID. FR. HESPERIDE.

Aurantia. Aglee.

XII. ATHENAIDES.

ENG. ATHENAID. FR. ATHENAIDE.

Olea. Fraxinus.

I will shortly note the changes of name in their twelve orders, and the reasons for them.

I. CHARITES.—The only change made in the nomenclature of this order is the slight one of ‘rubra’ for ‘rubus’: partly to express true sisterhood with the other Charites; partly to enforce the idea of redness, as characteristic of the race, both in the lovely purple and russet of their winter leafage, and in the exquisite bloom of scarlet on the stems in strong young shoots. They have every right to be placed among the Charites, first because the raspberry is really a more important fruit in domestic economy than the strawberry; and, secondly, because the wild bramble is often in its wandering sprays even more graceful than the rose; and in blossom and fruit the best autumnal gift that English Nature has appointed for her village children.

II. URANIDES.—Not merely because they are all of the color of the sky, but also sacred to Urania in their divine purity. ‘Convoluta’ instead of ‘convolvulus,’ chiefly for the sake of euphony; but also because pervinca is to be included in this group.

III. CYLLENIDES.—Named from Mount Cyllene in Arcadia, because the three races included in the order alike delight in rocky ground, and in the cold or moist air of mountain-clouds.

IV. OREIADES.—Described in next chapter.

V. PLEIADES.—From the habit of the flowers belonging to this order to get into bright local clusters. Silvia, for the wood-sorrel, will, I hope, be an acceptable change to my girl-readers.

VI. ARTEMIDES.—Dedicate to Artemis for their expression of energy, no less than purity. This character was rightly felt in them by whoever gave the name ‘Dianthus’ to their leading race; a name which I should have retained if it had not been bad Greek. I wish them, by their name ‘Clarissa’ to recall the memory of St. Clare, as ‘Francesca’ that of St. Francis.* The ‘issa,’ not without honour to the greatest of

* The four races of this order are more naturally distinct than botanists have recognized. In Clarissa, the petal is cloven into a fringe at

our English moral story-tellers, is added for the practical reason, that I think the sound will fasten in the minds of children the essential characteristic of the race, the cutting of the outer edge of the petal as if with scissors.

VII. VESTALES.—I allow this Latin form, because Hestiades would have been confused with Heliades. The order is named ‘of the hearth,’ from its manifold domestic use, and modest blossoming.

VIII. CYTHERIDES.—Dedicate to Venus, but in all purity and peace of thought. Giulietta, for the coarse, and more than ordinarily false, Polygala.

IX. HELIADES.—The sun-flowers.* (In English, Alcestd, in honour to Chaucer and the Daisy.

X. DELPHIDES.—Sacred to Apollo. Granata, changed from Punica, in honor to Granada and the Moors.

XI. HESPERIDES.—Already a name given to the order. Aegle, prettier and more classic than Libonia, includes the idea of brightness in the blossom.

XII. ATHENAIDES.—I take Fraxinus into this group, because the mountain ash, in its hawthorn-scented flower, scarletest of berries, and exquisitely formed and finished leafage, belongs wholly to the floral decoration of our native rocks, and is associated with their human interests, though lightly, not less spiritually, than the olive with the mind of Greece.

28. The remaining groups are in great part natural; but I the outer edge; in *Lychnis*, the petal is terminated in two rounded lobes and the fringe withdrawn to the top of the limb; in *Scintilla*, the petal is divided into two *sharp* lobes, without any fringe of the limb; and in *Mica*, the minute and scarcely visible flowers have simple and far separate petals. The confusion of these four great natural races under the vulgar or accidental botanical names of spittle-plant, shore-plant, sand-plant, etc., has become entirely intolerable by any rational student; but the names ‘*Scintilla*,’ substituted for *Stellaria*, and ‘*Mica*’ for the utterly ridiculous and probably untrue *Sagina*, connect themselves naturally with *Lychnis*, in expression of the luminous power of the white and sparkling blossoms.

* *Clytia* will include all the true sun-flowers, and *Falconia* the hawkweeds; but I have not yet completed the analysis of this vast and complex order, so as to determine the limits of *Margarita* and *Alcestd*.

separate for subsequent study five orders of supreme domestic utility, the Mallows, Currants, Pease,* Cresses, and Cranesbills, from those which, either in fruit or blossom, are for finer pleasure or higher beauty. I think it will be generally interesting for children to learn those five names as an easy lesson, and gradually discover, wondering, the world that they include. I will give their terminology at length, separately.

29. One cannot, in all groups, have all the divisions of equal importance; the Mallows are only placed with the other four for their great value in decoration of cottage gardens in autumn: and their softly healing qualities as a tribe. They will mentally connect the whole useful group with the three great *Æsculapiadæ*, *Cinchona*, *Coffea*, and *Camellia*.

30. Taking next the water-plants, crowned in the *DROSIDÆ*, which include the five great families, *Juncus*, *Jacinthus*, *Amaryllis*, *Iris*, and *Lilium*, and are masculine in their Greek name because their two first groups, *Juncus* and *Jacinthus*, are masculine, I gather together the three orders of *TRITONIDES*, which are notably trefoil; the *NAIADES*, notably quatrefoil, but for which I keep their present pretty name; and the *BATRACHIDES*,† notably cinqfoil, for which I keep their present ugly one, only changing it from Latin into Greek.

31. I am not sure of being forgiven so readily for putting the Grasses, Sedges, Mosses, and Lichens together, under the great general head of *Demetridæ*. But it seems to me the mosses and lichens belongs no less definitely to *Demeter*, in being the first gatherers of earth on rock, and the first coverers of its sterile surface, than the grass which at last prepares it to the foot and to the food of man. And with the mosses I shall take all the especially moss-plants which otherwise are homeless or companionless, *Drosera*, and the like, and as a connecting link with the flowers belonging to the

* The reader must observe that the positions given in this more developed system to any flower do not interfere with arrangements either formerly or hereafter given for *memoria technica*. The name of the pea, for instance (*alata*) is to be learned first among the twelve cinqfoils, p. 134, above; then transferred to its botanical place.

† The amphibious habit of this race is to me of more importance than its outlaid structure.

Dark Kora, the two strange orders of the Ophryds and Agarics.

32. Lastly will come the orders of flowers which may be thought of as belonging for the most part to the Dark Kora of the lower world,—having at least the power of death, if not its terror, given them, together with offices of comfort and healing in sleep, or of strengthening, if not too prolonged, action on the nervous power of life. Of these, the first will be the DIONYSIDÆ,—Hedera, Vitis, Liana ; then the DRACONIDÆ,—Atropa, Digitalis, Linaria ; and, lastly, the MOIRIDÆ,—Conium, Papaver, Solanum, Arum and Nerium.

33. As I see this scheme now drawn out, simple as it is, the scope of it seems not only far too great for adequate completion by my own labour, but larger than the time likely to be given to botany by average scholars would enable them intelligently to grasp : and yet it includes, I suppose, not the tenth part of the varieties of plants respecting which, in competitive examination, a student of physical science is now expected to know, or at least assert on hearsay, *something*.

So far as I have influence with the young, myself, I would pray them to be assured that it is better to know the habits of one plant than the names of a thousand ; and wiser to be happily familiar with those that grow in the nearest field, than arduously cognisant of all that plume the isles of the Pacific, or illumine the Mountains of the Moon.

Nevertheless, I believe that when once the general form of this system in Proserpina has been well learned, much other knowledge may be easily attached to it, or sheltered under the eaves of it : and in its own development, I believe everything may be included that the student will find useful, or may wisely desire to investigate, of properly European botany. But I am convinced that the best results of his study will be reached by a resolved adherence to extreme simplicity of primal idea, and primal nomenclature.

34. I do not think the need of revisal of our present scientific classification could be more clearly demonstrated than by the fact that laurels and roses are confused, even by Dr. Lindley, in the mind of his feminine readers ; the English word

laurel, in the index to his first volume of *Ladies' Botany*, referring them to the cherries, under which the common laurel is placed as '*Prunus Laurocerasus*,' while the true laurel, '*Laurus nobilis*,' must be found in the index of the second volume, under the Latin form '*Laurus*.'

This accident, however, illustrates another, and a most important point to be remembered, in all arrangements whether of plants, minerals, or animals. No single classification can possibly be perfect, or anything *like* perfect. It must be, at its best, a ground, or *warp* of arrangement only, through which, or over which, the cross threads of another,—yes, and of many others,—must be woven in our minds. Thus the almond, though in the form and colour of its flower, and method of its fruit, rightly associated with the roses, yet by the richness and sweetness of its kernel must be held mentally connected with all plants that bear nuts. These assuredly must have something in their structure common, justifying their being gathered into a conceived or conceivable group of '*Nuciferæ*,' in which the almond, hazel, walnut, cocoa-nut, and such others would be considered as having relationship, at least in their power of secreting a crisp and sweet substance which is not wood, nor bark, nor pulp, nor seed-pabulum reducible to softness by boiling ;—but quite separate substance, for which I do not know that there at present exists any botanical name,—of which, hitherto, I find no general account, and can only myself give so much, on reflection, as that it is crisp and close in texture, and always contains some kind of oil or milk.

35. Again, suppose the arrangement of plants could with respect to their flowers and fruits, be made approximately complete, they must instantly be broken and reformed by comparison of their stems and leaves. The three *creeping* families of the Charities,—*Rosa*, *Rubra*, and *Fragaria*,—must then be frankly separated from the elastic *Persica* and knotty *Pomum* ; of which one wild and lovely species, the hawthorn, is no less notable for the massive accumulation of wood in the stubborn stem of it, than the wild rose for her lovely power of wreathing her garlands at pleasure wherever they are

fairest, the stem following them and sustaining, where they will.

36. Thus, as we examine successively each part of any plant, new sisterhoods, and unthought-of fellowships, will be found between the most distant orders; and ravines of unexpected separation open between those otherwise closely allied. Few botanical characters are more definite than the leaf structure illustrated in Plate VI., which has given to one group of the Drosidæ the descriptive name of *Ensata*, (see above, Chapter IX., § 11,) but this conformation would not be wisely permitted to interfere in the least with the arrangement founded on the much more decisive floral aspects of the Iris and Lily. So, in the fifth volume of 'Modern Painters,' the sword-like, or rather rapier-like, leaves of the pine are opposed, for the sake of more vivid realization, to the shield-like leaves of the greater number of inland trees; but it would be absurd to allow this difference any share in botanical arrangement,—else we should find ourselves thrown into sudden discomfiture by the wide-waving and opening foliage of the palms and ferns.

37. But through all the defeats by which insolent endeavors to sum the orders of Creation must be reproved, and in the midst of the successes by which patient insight will be surprised, the fact of the *confirmation* of species in plants and animals must remain always a miraculous one. What outstretched sign of constant Omnipotence can be more awful, than that the susceptibility to external influences, with the reciprocal power of transformation, in the organs of the plant; and the infinite powers of moral training and mental conception over the nativity of animals, should be so restrained within impassable limits, and by inconceivable laws, that from generation to generation, under all the clouds and revolutions of heaven with its stars, and among all the calamities and convulsions of the Earth with her passions, the numbers and the names of her Kindred may still be counted for her in unfailing truth;—still the fifth sweet leaf unfold for the Rose, and the sixth spring for the Lily; and yet the wolf rave tameless round the folds of the pastoral mountains, and yet the tiger flame through the forests of the night

CHAPTER XII.

CORA AND KRONOS.

1. OF all the lovely wild plants—and few, mountain-bred, in Britain, are other than lovely,—that fill the clefts and crest the ridges of my Brantwood rock, the dearest to me, by far, are the clusters of whortleberry which divide possession of the lower slopes with the wood hyacinth and pervenche. They are personally and specially dear to me for their association in my mind with the woods of Montanvert ; but the plant itself, irrespective of all accidental feeling, is indeed so beautiful in all its ways—so delicately strong in the spring of its leafage, so modestly wonderful in the formation of its fruit, and so pure in choice of its haunts, not capriciously or unfamiliarly, but growing in luxuriance through all the healthiest and sweetest seclusion of mountain territory throughout Europe,—that I think I may without any sharp remonstrance be permitted to express for this once only, personal feeling in my nomenclature, calling it in Latin ‘*Myrtilla Cara*,’ and in French ‘*Myrtille Chérie*,’ but retaining for it in English its simply classic name, ‘Blue Whortle.’

2. It is the most common representative of the group of *Myrtillæ*, which, on reference to our classification, will be found central between the *Ericæ* and *Auroræ*. The distinctions between these three families may be easily remembered, and had better be learned before going farther ; but first let us note their fellowship. They are all *Oreiades*, mountain plants ; in specialty, they are all strong in stem, low in stature, and the *Ericæ* and *Auroræ* glorious in the flush of their infinitely exulting flowers, (“the rapture of the heath”—above spoken of, p. 63.) But all the essential loveliness of the *Myrtillæ* is in their leaves and fruit : the first always exquisitely finished and grouped like the most precious decorative work of sacred painting ; the second, red or purple, like beads of coral or amethyst. Their minute flowers have rarely any

general part or power in the colors of mountain ground ; but, examined closely, they are one of the chief joys of the traveller's rest among the Alps ; and full of exquisiteness unspeakable, in their several bearings and miens of blossom, so to speak. Plate VIII. represents, however feebly, the proud bending back of her head by *Myrtilla Regina* : * an action as beautiful in *her* as it is terrible in the Kingly Serpent of Egypt.

3. The formal differences between these three families are trenchant and easily remembered. The *Ericæ* are all quatrefoils, and quatrefoils of the most studied and accomplished symmetry ; and they bear no berries, but only dry seeds. The *Myrtillæ* and *Auroræ* are both Cinqufoil ; but the *Myrtillæ* are symmetrical in their blossom, and the *Auroræ* unsymmetrical. Farther, the *Myrtillæ* are not absolutely determinate in the number of their foils, (this being essentially a characteristic of flowers exposed to much hardship,) and are thus sometimes quatrefoil, in sympathy with the *Ericæ*. But the *Auroræ* are strictly cinqufoil. These last are the only European form of a larger group, well named 'Azalea' from the Greek *ἀζα*, dryness, and its adjective *ἀζαλέα*, dry or parched ; and *this* name must be kept for the world-wide group, (including under it *Rhododendron*, but not *Kalmia*,) because there is an under-meaning in the word *Aza*, enabling it to be applied to the substance of dry earth, and indicating one of the great functions of the *Oreiades*, in common with the mosses,—the collection of earth upon rocks.

4. Neither the *Ericæ*, as I have just said, nor *Auroræ* bear useful fruit ; and the *Ericæ* are named from their consequent worthlessness in the eyes of the Greek farmer ; they were the plants he 'tore up' for his bed, or signal-fire, his word for them including a farther sense of crushing or bruising into a heap. The Westmoreland shepherds now, alas ! burn them remorselessly on the ground, (and a year since had nearly set the copse of Brantwood on fire just above the house.) The sense of parched and fruitless existence is

* "*Arctostaphylos Alpina*," I believe ; but scarcely recognize the flower in my botanical books.

given to the heaths, with beautiful application of the context, in our English translation of Jeremiah xvii. 6 ; but I find the plant there named is, in the Septuagint, Wild Tamarisk ; the mountains of Palestine being, I suppose, in that latitude, too low for heath, unless in the Lebanon.

5. But I have drawn the reader's thoughts to this great race of the Oreiades at present, because they place for us in the clearest light a question which I have finally to answer before closing the first volume of Proserpina ; namely, what is the real difference between the three ranks of Vegetative Humility, and Noblesse — the Herb, the Shrub, and the Tree ?

6. Between the herb, which perishes annually, and the plants which construct year after year an increasing stem, there is, of course, no difficulty of discernment ; but between the plants which, like these Oreiades, construct for themselves richest intricacy of supporting stem, yet scarcely rise a fathom's height above the earth they gather and adorn,—between these, and the trees that lift cathedral aisles of colossal shade on Andes and Lebanon,—where is the limit of kind to be truly set ?

7. We have the three orders given, as no botanist could, in twelve lines by Milton :—

“ Then herbs of every leaf, that sudden flow'r'd
 Op'ning their various colours, and made gay
 Her bosom smelling sweet ; and, these scarce blown,
 Forth flourish'd thick the clust'ring vine, forth crept
 The swelling gourd, up stood the corny reed
 Embattel'd in her field ; and th' *humble shrub*,
And bush with frizzled hair implicit : last
 Rose, as in dance, the stately trees, and spread
 Their branches hung with copious fruits, or gemm'd
 Their blossoms ; with high woods the hills were crown'd ;
 With tufts the valleys and each fountain side ;
 With borders long the rivers.”

Only to learn, and be made to understand, these twelve lines thoroughly would teach a youth more of true botany than an entire Cyclopædia of modern nomenclature and de-

scription : they are, like all Milton's work, perfect in accuracy of epithet, while consummate in concentration. Exquisite in touch, as infinite in breadth, they gather into their unbroken clause of melodious compass the conception at once of the Columbian prairie, the English cornfield, the Syrian vineyard, and the Indian grove. But even Milton has left untold, and for the instant perhaps unthought of, the most solemn difference of rank between the low and lofty trees, not in magnitude only, nor in grace, but in duration.

8. Yet let us pause before passing to this greater subject, to dwell more closely on what he has told us so clearly,—the difference in Grace, namely between the trees that rise 'as in dance,' and 'the bush with frizzled hair.' For the bush form is essentially one taken by vegetation in some kind of distress ; scorched by heat, discouraged by darkness, or bitten by frost ; it is the form in which isolated knots of earnest plant life stay the flux of fiery sands, bind the rents of tottering crags, purge the stagnant air of crave or chasm, and fringe with sudden hues of unhopèd spring the Arctic edge of retreating desolation.

On the other hand, the trees which, as in sacred dance, make the borders of the rivers glad with their procession, and the mountain ridges statelier with their pride, are all expressions of the vegetative power in its accomplished felicities ; gathering themselves into graceful companionship with the fairest arts and serenest life of man ; and providing not only the sustenance and the instruments, but also the lessons and the delights, of that life, in perfectness of order, and unblighted fruition of season and time.

9. 'Interitura'—yet these not to-day, nor to-morrow, nor with the decline of the summer's sun. We describe a plant as small or great ; and think we have given account enough of its nature and being. But the chief question for the plant, as for the human creature, is the Number of its days ; for to the tree, as to its master, the words are forever true—"As thy Day is, so shall thy Strength be."

10. I am astonished hourly, more and more, at the apathy and stupidity which have prevented me hitherto from learn-

ing the most simple facts at the base of this question ! Here is this myrtle bush in my hand—its cluster of some fifteen or twenty delicate green branches knitting themselves downwards into the stubborn brown of a stem on which my knife makes little impression. I have not the slightest idea how old it is, still less how old it might one day have been if I had not gathered it ; and, less than the least, what hinders it from becoming as old as it likes ! What doom is there over these bright green sprays, that they may never win to any height or space of verdure, nor persist beyond their narrow scope of years ?

11. And the more I think the more I bewilder myself ; for these bushes, which are pruned and clipped by the deathless Gardener into these lowly thickets of bloom, do not strew the ground with fallen branches and faded clippings in any wise,—it is the pining umbrage of the patriarchal trees that tinges the ground and betrays the foot beneath them : but, under the heather and the Alpine rose.—Well, what is under them, then ? I never saw, nor thought of looking,—will look presently under my own bosquets and beds of lingering heather-blossom : beds indeed they were only a month since, a foot deep in flowers, and close in tufted cushions, and the mountain air that floated over them rich in honey like a draught of metheglin.

12. Not clipped, nor pruned, I think, after all,—nor dwarfed in the gardener's sense ; but pausing in perpetual youth and strength, ordained out of their lips of roseate infancy. Rose-trees—the botanists have falsely called the proudest of them ; yet not trees in any wise, they, nor doomed to know the edge of axe at their roots, nor the hoary waste of time, or searing thunder-stroke, on sapless branches. Continual morning for them, and *in* them ; they themselves an Aurora, purple and cloudless, stayed on all the happy hills. That shall be our name for them, in the flushed Phœnician colour of their height, in calm or tempest of the heavenly sea ; how much holier than the depth of the Tyrian ! And the queen of them on our own Alps shall be '*Aurora Alpium*.' *

* '*Aurora Regina*,' changed from *Rhododendron Ferrugineum*.

13. There is one word in the Miltonian painting of them which I must lean on specially ; for the accurate English of it hides deep morality no less than botany. ‘ With hair *implicit*.’ The interweaving of complex band, which knits the masses of heath or of Alpine rose into their dense tufts and spheres of flower, is to be noted both in these, and in stem structure of a higher order like that of the stone pine, for an expression of the instinct of the plant gathering itself into protective unity, whether against cold or heat, while the forms of the trees which have no hardship to sustain are uniformly based on the effort of each spray to *separate* itself from its fellows to the utmost, and obtain around its own leaves the utmost space of air.

In vulgar modern English, the term ‘implicit,’ used of Trust or Faith, has come to signify only its serenity. But the Miltonian word gives the *reason* of serenity : the root and branch intricacy of closest knowledge and fellowship.

14. I have said that Milton has told us more in these few lines than any botanist could. I will prove my saying by placing in comparison with them two passages of description by the most imaginative and generally well-trained scientific man since Linnæus—Humboldt—which, containing much that is at this moment of special use to us, are curious also in the confusion even of the two orders of annual and perennial plants, and show, therefore, the extreme need of most careful initial work in this distinction of the reign of Cora from that of Kronos.

“The disk of the setting sun appeared like a globe of fire suspended over the savannah ; and its last rays, as they swept the earth, illumined the extremities of the grass, strongly agitated by the evening breeze. In the low and humid places of the equinoxial zone, even when the gramineous plants and reeds present the aspect of a meadow, of turf, a rich decoration of the picture is usually wanting. I mean that variety of wild flowers which, scarcely rising above the grass, seem to lie upon a smooth bed of verdure. Between the tropics, the strength and luxury of vegetation give such a development to plants, that the smallest of the dicotyledonous family become

shrubs.* It would seem as if the liliaceous plants, mingled with the gramina, assumed the place of the flowers of our meadows. Their form is indeed striking; they dazzle by the variety and splendor of their colours; but, too high above the soil, they disturb that harmonious relation which exists among the plants that compose our meadows and our turf. Nature in her beneficence, has given the landscape under every zone its peculiar type of beauty.

"After proceeding four hours across the savannahs, we entered into a little wood composed of shrubs and small trees, which is called El Pejual; no doubt because of the great abundance of the 'Pejoa' (*Gaultheria odorata*,) a plant with very odoriferous leaves. The steepness of the mountain became less considerable, and we felt an indescribable pleasure in examining the plants of this region. Nowhere, perhaps, can be found collected together in so small a space of ground, productions so beautiful, and so remarkable in regard to the geography of plants. At the height of a thousand toises the lofty savannahs of the hills terminate in a zone of shrubs, which by their appearance, their tortuous branches, their stiff leaves, and the dimensions and beauty of their purple flowers, remind us of what is called in the Cordilleras of the Andes the vegetation of the *paramos*† and the *punas*. We find there the family of the Alpine rhododendrons, the thibaudias, the andromedas, the vacciniums, and those befarias‡ with resinous leaves, which we have several times compared to the rhododendron of our European Alps.

"Even when nature does not produce the same species in analogous climates, either in the plains of isothermal parallels, or on table-lands the temperature of which resembles that of places nearer the poles, we still remark a striking resem-

* I do not see what this can mean. Primroses and cowslips can't become shrubs; nor can violets, nor daisies, nor any other of our pet meadow flowers.

† 'Deserts.' *Punas* is not in my Spanish dictionary, and the reference to a former note is wrong in my edition of Humboldt, vol. iii., p. 490.

‡ "The Alpine rose of equinoctial America," p. 453.

blance of appearance and physiognomy in the vegetation of the most distant countries. This phenomenon is one of the most curious in the history of organic forms. I say the history; for in vain would reason forbid man to form hypotheses on the origin of things: he is not the less tormented with these insoluble problems of the distribution of beings."

15. Insoluble—yes, assuredly, poor little beaten phantasms of palpitating clay that we are—and who asked us to solve it? Even this Humboldt, quiet-hearted and modest watcher of the ways of Heaven, in the real make of him, came at last to be so far puffed up by his vain science in declining years that he must needs write a Kosmos of things in the Universe, forsooth, as if he knew all about them! when he was not able meanwhile, (and does not seem even to have desired the ability,) to put the slightest Kosmos into his own 'Personal Narrative'; but leaves one to gather what one wants out of its wild growth; or rather, to wash or winnow what may be useful out of its débris, without any vestige either of reference or index; and I must look for these fragmentary sketches of heath and grass through chapter after chapter about the races of the Indian and religion of the Spaniard,—these also of great intrinsic value, but made useless to the general reader by interspersed experiment on the drifts of the wind and the depths of the sea.

16. But one more fragment out of a note (vol. iii., p. 494) I must give, with reference to an order of the Rhododendrons as yet wholly unknown to me.

"The name of vine tree, 'uvas camaronas' (Shrimp grapes?) is given in the Andes to plants of the genus *Thibaudia* on account of their *large succulent fruit*. Thus the ancient botanists give the name of Bear's vine, 'Uva Ursi,' and vine of Mount Ida, 'Vitis Idea,' to an *Arbutus* and *Myrtillus* which belong, like the *Thibaudia*, to the family of the *Ericinæ*."

Now, though I have one entire bookcase and half of another, and a large cabinet besides, or about fifteen feet square of books on botany beside me here, and a quantity more at Oxford, I have no means whatever, in all the heap, of finding out what a *Thibaudia* is like. Loudon's *Cyclopædia*, the only

general book I have, tells me only that it will grow well in camellia houses, that its flowers develop at Christmas, and that they are beautifully varied like a fritillary : whereupon I am very anxious to see them, and taste their fruit, and be able to tell my pupils something intelligible of them,—a new order, as it seems to me, among my Oreiades. But for the present I can make no room for them, and must be content, for England and the Alps, with my single class, Myrtilla, including all the fruit-bearing and (more or less) myrtle-leaved kinds ; and Azalea for the fruitless flushing of the loftier tribes ; taking the special name ‘Aurora’ for the red and purple ones of Europe, and resigning the already accepted ‘Rhodora’ to those of the Andes and Himalaya.

17. Of which also, with help of earnest Indian botanists, I hope nevertheless to add some little history to that of our own Oreiades ; but shall set myself on the most familiar of them first, as I partly hinted in taking for the frontispiece of this volume two unchecked shoots of our commonest heath, in their state of full lustre and decline. And now I must go out and see and think—and for the first time in my life—what becomes of all these fallen blossoms, and where my own mountain Cora hides herself in winter ; and where her sweet body is laid in its death.

Think of it with me, for a moment before I go. That harvest of amethyst bells, over all Scottish and Irish and Cumberland hill and moorland ; what substance is there in it, yearly gathered out of the mountain winds,—stayed there, as if the morning and evening clouds had been caught out of them and woven into flowers ; ‘Ropes of sea-sand’—but that is child’s magic merely, compared to the weaving of the Heath out of the cloud. And once woven, how much of it is forever worn by the Earth ? What weight of that transparent tissue, half crystal and half comb of honey, lies strewn every year dead under the snow ?

I must go and look, and can write no more to-day ; nor to-morrow neither. I must gather slowly what I see, and remember ; and meantime leaving, to be dealt with afterwards, the difficult and quite separate question of the production of



PLATE VIII.—MYRTILLA REGINA.

Sketched for her gesture only. Isella, 1877.

wood, I will close this first volume of *Proserpina* with some necessary statements respecting the operations, serviceable to other creatures than themselves, in which the lives of the noblest plants are ended : honourable in this service equally, though evanescent, some,—in the passing of a breeze—or the dying of a day ;—and patient some, of storm and time, serene in fruitful sanctity, through all the uncounted ages which Man has polluted with his tears.

CHAPTER XIII.

THE SEED AND HUSK.

1. Not the least sorrowful, nor least absurd of the confusions brought on us by unscholarly botanists, blundering into foreign languages, when they do not know how to use their own, is that which has followed on their practice of calling the seed-vessels of flowers ‘egg-vessels,’* in Latin ; thus involving total loss of the power of the good old English word ‘husk,’ and the good old French one, ‘cosse.’ For all the treasures of plants (see Chapter IV., § 17) may be best conceived, and described, generally, as consisting of ‘seed’ and ‘husk,’—for the most part two or more seeds, in a husk composed of two or more parts, as pease in their shell, pips in an orange, or kernels in a walnut ; but whatever their number, or the method of their enclosure, let the student keep clear in his mind, for the base of all study of fructification, the broad distinction between the seed, as one thing, and the husk as another : the seed, essential to the continuance of the plant’s race ; and the husk, adapted, primarily, to its guard and dissemination ; but secondarily, to quite other and far more important functions.

2. For on this distinction follows another practical one of great importance. A seed may serve, and many do mightily serve, for the food of man, when boiled, crushed, or otherwise

* More literally “persons to whom the care of eggs is entrusted.”

industriously prepared by man himself, for his mere *sustenance*. But the *husk* of the seed is prepared in many cases for the delight of his eyes, and the pleasure of his palate, by Nature herself, and is then called a 'fruit.'

3. The varieties of structure both in seed and husk, and yet more, the manner in which the one is contained, and distributed by, the other, are infinite; and in some cases the husk is apparently wanting, or takes some unrecognizable form. But in far the plurality of instances the two parts of the plant's treasury are easily distinguishable, and must be separately studied, whatever their apparent closeness of relation, or, (as in all natural things,) the equivocation sometimes taking place between the one and the other. To me, the especially curious point in this matter is that, while I find the most elaborate accounts given by botanists of the stages of growth in each of these parts of the treasury, they never say of what use the guardian is to the guarded part, irrespective of its service to man. The mechanical action of the husk in containing and scattering the seeds, they indeed often notice and insist on; but they do not tell us of what, if any, nutritious or fostering use the rind is to a chestnut, or an orange's pulp to its pips, or a peach's juice to its stone.

4. Putting aside this deeper question for the moment, let us make sure we understand well, and define safely, the separate parts themselves. A seed consists essentially of a store, or sack, containing substance to nourish a germ of life, which is surrounded by such substance, and in the process of growth is first fed by it. The germ of life itself rises into two portions, and not more than two, in the seeds of two-leaved plants; but this symmetrical dualism must not be allowed to confuse the student's conception, of the *three* organically separate parts,—the tough skin of a bean, for instance; the softer contents of it which we boil to eat; and the small germ from which the root springs when it is sown. A bean is the best type of the whole structure. An almond out of its shell, a peach-kernel, and an apple-pip are also clear and perfect, though varied types.

5. The husk, or seed-vessel, is seen in perfect simplicity of

type in the pod of a bean, or the globe of a poppy. There are, I believe, flowers in which it is absent or imperfect ; and when it contains only one seed, it may be so small and closely united with the seed it contains, that both will be naturally thought of as one thing only. Thus, in a dandelion, the little brown grains, which may be blown away, each with its silken parachute, are every one of them a complete husk and seed together. But the majority of instances (and those of plants the most serviceable to man) in which the seed-vessel has entirely a separate structure and mechanical power, justify us in giving it the normal term 'husk,' as the most widely applicable and intelligible.

6. The change of green, hard, and tasteless vegetable substance into beautifully coloured, soft, and delicious substance, which produces what we call a fruit, is, in most cases, of the husk only ; in others, of the part of the stalk which immediately sustains the seed ; and in a very few instances, not properly a change, but a distinct formation, of fruity substance between the husk and seed. Normally, however, the husk, like the seed, consists always of three parts ; it has an outer skin, a central substance of peculiar nature, and an inner skin, which holds the seed. The main difficulty, in describing or thinking of the completely ripened product of any plant, is to discern clearly which is the inner skin of the husk, and which the outer skin of the seed. The peach is in this respect the best general type,—the woolly skin being the outer one of the husk ; the part we eat, the central substance of the husk ; and the hard shell of the stone, the inner skin of the husk. The bitter kernel within is the seed.

7. In this case, and in the plum and cherry, the two parts under present examination—husk and seed—separate naturally ; the fruity part, which is the body of the husk, adhering firmly to the shell, which is its inner coat. But in the walnut and almond, the two outer parts of the husk separate from the interior one, which becomes an apparently independent 'shell.' So that when first I approached this subject I divided the general structure of a treasury into *three* parts—husk, shell, and kernel ; and this division, when we once have mas-

tered the main one, will be often useful. But at first let the student keep steadily to his conception of the two constant parts, husk and seed, reserving the idea of shells and kernels for one group of plants only.

8. It will not be always without difficulty that he maintains the distinction, when the tree pretends to have changed it. Thus, in the chestnut, the inner coat of the husk becomes brown, adheres to the seed, and seems part of it; and we naturally call only the thick, green, prickly coat, the husk. But this is only one of the deceiving tricks of Nature, to compel our attention more closely. The real place of separation, to *her* mind, is between the mahogany-coloured shell and the nut itself, and that more or less silky and flossy coating within the brown shell is the true lining of the entire 'husk.' The paler brown skin, following the rugosities of the nut, is the true sack or skin of the seed. Similarly in the walnut and almond.

9. But, in the apple, two new tricks are played us. First, in the brown skin of the ripe pip, we might imagine we saw the part correspondent to the mahogany skin of the chestnut, and therefore the inner coat of the husk. But it is not so. The brown skin of the pips belongs to them properly, and is all their own. It is the true skin or sack of the seed. The inner coat of the husk is the smooth, white, scaly part of the core that holds them.

Then,—for trick number two. We should as naturally imagine the skin of the apple, which we peel off, to be correspondent to the skin of the peach; and therefore, to be the outer part of the husk. But not at all. The outer part of the husk in the apple is melted away into the fruity mass of it, and the red skin outside is the skin of its *stalk*, not of its seed-vessel at all!

10. I say 'of its stalk,'—that is to say, of the part of the stalk immediately sustaining the seed, commonly called the torus, and expanding into the calyx. In the apple, this torus incorporates itself with the husk completely; then refines its own external skin, and colours *that* variously and beautifully, like the true skin of the husk in the peach, while the withered leaves of the calyx remain in the 'eye' of the apple.

But in the 'hip' of the rose, the incorporation with the husk of the seed does not take place. The torus, or,—as in this flower from its peculiar form it is called,—the tube of the calyx, alone forms the frutescent part of the hip; and the complete seeds, husk and all, (the firm triangular husk enclosing an almond-shaped kernel,) are grouped closely in its interior cavity, while the calyx remains on the top in a large and scarcely withering star. In the nut, the calyx remains green and beautiful, forming what we call the husk of a filbert; and again we find Nature amusing herself by trying to make us think that this strict envelope, almost closing over the single seed, is the same thing to the nut that its green shell is to a walnut!

11. With still more capricious masquing, she varies and hides the structure of her 'berries.'

The strawberry is a hip turned inside-out, the frutescent receptacle changed into a scarlet ball, or cone, of crystalline and delicious coral, in the outside of which the separate seeds, husk and all, are imbedded. In the raspberry and blackberry, the interior mound remains sapless; and the rubied translucency of dulcet substance is formed round each separate seed, *upon* its husk; not a part of the husk, but now an entirely independent and added portion of the plant's bodily form.

12. What is thus done for each seed, on the *outside* of the receptacle, in the raspberry, is done for each seed, *inside* the calyx, in a pomegranate; which is a hip in which the seeds have become surrounded with a radiant juice, richer than claret wine; while the seed itself, within the generous jewel, is succulent also, and spoken of by Tournefort as a "baie succulente." The tube of the calyx, brown-russet like a large hip, externally, is yet otherwise divided, and separated wholly from the cinque-foiled, and cinque-celled rose, both in number of petal and division of treasures; the calyx has eight points, and nine cells.

13. Lastly, in the orange, the fount of fragrant juice is interposed between the seed and the husk. It is wholly independent of both; the Aurantine rind, with its white lining and divided compartments, is the true husk; the orange pips are

the true seeds ; and the eatable part of the fruit is formed between them, in clusters of delicate little flasks, as if a fairy's store of scented wine had been laid up by her in the hollow of a chestnut shell, between the nut and rind ; and then the green changed to gold.

14. I have said '*lastly*'—of the orange, for fear of the reader's weariness only ; not as having yet represented, far less exhausted, the variety of frutescent form. But these are the most important types of it ; and before I can explain the relation between these, and another, too often confounded with them—the *granular* form of the seed of grasses,—I must give some account of what, to man, is far more important than the form—the gift to him in fruit-food ; and trial, in fruit-temptation.

CHAPTER XIV.

THE FRUIT GIFT.

1. IN the course of the preceding chapter, I hope that the reader has obtained, or may by a little patience both obtain and secure, the idea of a great natural Ordinance, which, in the protection given to the part of plants necessary to prolong their race, provides, for happier living creatures, food delightful to their taste, and forms either amusing or beautiful to their eyes. Whether in receptacle, calyx, or true husk,—in the cup of the acorn, the fringe of the filbert, the down of the apricot, or bloom of the plum, the powers of Nature consult quite other ends than the mere continuance of oaks and plum trees on the earth ; and must be regarded always with gratitude more deep than wonder, when they are indeed seen with human eyes and human intellect.

2. But in one family of plants, the *contents* also of the seed, not the envelope of it merely, are prepared for the support of the higher animal life ; and their grain, filled with the substance which, for universally understood name, may best keep the Latin one of *Farina*,—becoming in French, '*Farine*,' and

in English, 'Flour,'—both in the perfectly nourishing elements of it, and its easy and abundant multiplicability, becomes the primal treasure of human economy.

3. It has been the practice of botanists of all nations to consider the seeds of the grasses together with those of roses and pease, as if all could be described on the same principles, and with the same nomenclature of parts. But the grain of corn is a quite distinct thing from the seed of pease. In it, the husk and the seed envelope have become inextricably one. All the exocarps, endocarps, epicarps, mesocarps, shells, husks, sacks, and skins, are woven at once together into the brown bran; and inside of that, a new substance is collected for us, which is not what we boil in pease, or poach in eggs, or munch in nuts, or grind in coffee;—but a thing which, mixed with water and then baked, has given to all the nations of the world their prime word for food, in thought and prayer,—Bread; their prime conception of the man's and woman's labor in preparing it—("whoso putteth hand to the *plough*"—two women shall be grinding at the *mill*)—their prime notion of the means of cooking by fire—"which to-day is, and to-morrow is cast into the *oven*"), and their prime notion of culinary office—the "*chief baker*," cook, or pastry cook,—(compare Bedredin Hassan in the Arabian Nights): and, finally, to modern civilization, the Saxon word '*lady*,' with whatever it imports.

4. It has also been the practice of botanists to confuse all the ripened products of plants under the general term 'fruit.' But the essential and separate fruit-gift is of two substances, quite distinct from flour, namely, oil and wine, under the last term including for the moment all kinds of juice which will produce alcohol by fermentation. Of these, oil may be produced either in the kernels of nuts, as in almonds, or in the substance of berries, as in the olive, date, and coffee-berry. But the sweet juice which will become medicinal in wine, can only be developed in the husk, or in the receptacle.

5. The office of the Chief Butler, as opposed to that of the Chief Baker, and the office of the Good Samaritan, pouring in oil and wine, refer both to the total fruit-gift in both kinds: but in the study of plants, we must primarily separate our

notion of their gifts to men into the three elements, flour, oil, and wine ; and have instantly and always intelligible names for them in Latin, French, and English.

And I think it best not to confuse our ideas of pure vegetable substance with the possible process of fermentation :—so that rather than ‘wine,’ for a constant specific term, I will take ‘Nectar,’—this term more rightly including the juices of the peach, nectarine, and plum, as well as those of the grape, currant, and apple.

Our three separate substances will then be easily named in all three languages :

Farina.	Oleum.	Nectar.
Farine.	Huile.	Nectare.
Flour.	Oil.	Nectar.

There is this farther advantage in keeping the third common term, that it leaves us the words Succus, Jus, Juice, for other liquid products of plants, watery, milky, sugary, or resinous,—often indeed important to man, but often also without either agreeable flavor or nutritious power ; and it is therefore to be observed with care that we may use the word ‘juice,’ of a liquid produced by any part of a plant, but ‘nectar,’ only of the juices produced in its fruit.

6. But the good and pleasure of fruit is not in the juice only ;—in some kinds, and those not the least valuable, (as the date,) it is not in the juice at all. We still stand absolutely in want of a word to express the more or less firm *substance* of fruit, as distinguished from all other products of a plant. And with the usual ill-luck,—(I advisedly think of it as demoniacal misfortune)—of botanical science, no other name has been yet used for such substance than the entirely false and ugly one of ‘Flesh,’—Fr., ‘Chair,’ with its still more painful derivation ‘Charnu,’ and in England the monstrous scientific term, ‘Sarco-carp.’

But, under the housewifery of Proserpina, since we are to call the juice of fruit, Nectar, its substance will be as naturally and easily called Ambrosia ; and I have no doubt that this,

with the other names defined in this chapter, will not only be found practically more convenient than the phrases in common use, but will more securely fix in the student's mind a true conception of the essential differences in substance, which, ultimately, depend wholly on their pleasantness to human perception, and offices for human good ; and not at all on any otherwise explicable structure or faculty. It is of no use to determine, by microscope or retort, that cinnamon is made of cells with so many walls, or grape-juice of molecules with so many sides ;—we are just as far as ever from understanding why these particular interstices should be aromatic, and these special parallelopipeds exhilarating, as we were in the savagely unscientific days when we could only see with our eyes, and smell with our noses. But to call each of these separate substances by a name rightly belonging to it through all the past variations of the language of educated man, will probably enable us often to discern powers in the thing itself, of affecting the human body and mind, which are indeed qualities infinitely more its *own*, than any which can possibly be extracted by the point of a knife, or brayed out with a mortar and pestle.

7. Thus, to take merely instance in the three main elements of which we have just determined the names,—flour, oil, and ambrosia ;—the differences in the kinds of pleasure which the tongue received from the powderiness of oat-cake, or a well-boiled potato—(in the days when oat-cake and potatoes were !) —from the glossily-softened crispness of a well-made salad, and from the cool and fragrant amber of an apricot, are indeed distinctions between the essential virtues of things which were made to be *tasted*, much more than to be eaten ; and in their various methods of ministry to, and temptation of, human appetites, have their part in the history, not of elements merely, but of souls ; and of the soul-virtues, which from the beginning of the world have bade the barrel of meal not waste, nor the cruse of oil fail ; and have planted, by waters of comfort, the fruits which are for the healing of nations.

8. And, again, therefore, I must repeat, with insistance,

the claim I have made for the limitation of language to the use made of it by educated men. The word 'carp' could never have multiplied itself into the absurdities of endo-carps and epi-carps, but in the mouths of men who scarcely ever read it in its original letters, and therefore never recognized it as meaning precisely the same thing as 'fructus,' which word, being a little more familiar with, they would have scarcely abused to the same extent; they would not have called a walnut shell an intra-fruct—or a grape skin an extra-fruct; but again, because, though they are accustomed to the English 'fructify,' 'frugivorous'—and 'usufruct,' they are unaccustomed to the Latin 'fructus,' and unconscious therefore that the derivative 'fructus' must always, in right use, mean an *enjoyed* thing, they generalize every mature vegetable product under the term; and we find Dr. Gray coolly telling us that there is no fruit so "likely to be mistaken for a seed," as a grain of corn! a grain, whether of corn, or any other grass, being precisely the vegetable structure to which frutescent change is forever forbidden! and to which the word *seed* is primarily and perfectly applicable!—the thing to be *sown*, not grafted.

9. But to mark this total incapability of frutescent change, and connect the form of the seed more definitely with its dusty treasure, it is better to reserve, when we are speaking with precision, the term 'grain' for the seeds of the grasses: the difficulty is greater in French than in English: because they have no monosyllabic word for the constantly granular 'seed'; but for us the terms are all simple, and already in right use, only not quite clearly enough understood; and there remains only one real difficulty now in our system of nomenclature, that having taken the word 'husk' for the seed-vessel, we are left without a general word for the true fringe of a filbert, or the chaff of a grass. I don't know whether the French 'frange' could be used by them in this sense, if we took it in English botany. But for the present, we can manage well enough without it, one general term, 'chaff,' serving for all the grasses, 'cup' for acorns, and 'fringe' for nuts.

10. But I call this a *real* difficulty, because I suppose, among

the myriads of plants of which I know nothing, there may be forms of the envelope of fruits or seeds which may, for comfort of speech, require some common generic name. One *unreal* difficulty, or shadow of difficulty, remains in our having no entirely comprehensive name for seed and seed-vessel together than that the botanists now use, 'fruit.' But practically, even now, people feel that they can't gather figs of thistles, and never speak of the fructification of a thistle, or of the fruit of a dandelion. And, re-assembling now, in one view, the words we have determined on, they will be found enough for all practical service, and in such service always accurate, and, usually, suggestive. I repeat them in brief order, with such farther explanation as they need.

11. All ripe products of the life of flowers consist essentially of the Seed and Husk,—these being, in certain cases, sustained, surrounded, or provided with means of motion, by other parts of the plant; or by developments of their own form which require in each case distinct names. Thus the white cushion of the dandelion to which its brown seeds are attached, and the personal parachutes which belong to each, must be separately described for that species of plants; it is the little brown thing they sustain and carry away on the wind, which must be examined as the essential product of the floret;—the 'seed and husk.'

12. Every seed has a husk, holding either that seed alone, or other seeds with it.

Every perfect seed consists of an embryo, and the substance which first nourishes that embryo; the whole enclosed in a sack or other sufficient envelope. Three essential parts altogether.

Every perfect husk, vulgarly pericarp, or 'round-fruit,'—(as periwig, 'round-wig,')—consists of a shell, (vulgarly endocarp,) rind, (vulgarly mesocarp,) and skin, (vulgarly epicarp); three essential parts altogether. But one or more of these parts may be effaced, or confused with another; and in the seeds of grasses they all concentrate themselves into bran.

13. When a husk consists of two or more parts, each of which has a separate shaft and volute, uniting in the pillar

and volute of the flower, each separate piece of the husk is called a 'carpel.' The name was first given by De Candolle, and must be retained. But it continually happens that a simple husk divides into two parts corresponding to the two leaves of the embryo, as in the peach, or symmetrically holding alternate seeds, as in the pea. The beautiful drawing of the pea-shell with its seeds, in Rousseau's botany, is the only one I have seen which rightly shows and expresses this arrangement.

14. A Fruit is either the husk, receptacle, petal, or other part of a flower *external to the seed*, in which chemical changes have taken place, fitting it for the most part to become pleasant and healthful food for man, or other living animals; but in some cases making it bitter or poisonous to them, and the enjoyment of it depraved or deadly. But, as far as we know, it is without any definite office to the seed it contains; and the change takes place entirely to fit the plant to the service of animals.*

In its perfection, the Fruit Gift is limited to a temperate zone, of which the polar limit is marked by the strawberry, and the equatorial by the orange. The more arctic regions produce even the smallest kinds of fruit with difficulty; and the more equatorial, in coarse, oleaginous, or over-luscious masses.

15. All the most perfect fruits are developed *from exquisite forms either of foliage or flower*. The vine leaf, in its generally decorative power, is the most important, both in life and in art, of all that shade the habitations of men. The olive leaf is, without any rival, the most beautiful of the leaves of timber trees; and its blossom, though minute, of extreme beauty. The apple is essentially the fruit of the rose, and the peach of her only rival in her own colour. The cherry and orange blossom are the two types of floral snow.

* A most singular sign of this function is given to the chemistry of the changes, according to a French botanist, to whose carefully and richly illustrated volume I shall in future often refer my readers. "Vers l'époque de la maturité, les fruits *exhalent de l'acide carbonique*. Ils ne présentent plus dès lors aucun dégagement d'oxygène pendant le jour, et *respirent, pour ainsi dire, à la façon des animaux*." (Figuier, 'Histoire des Plantes,' p. 182. 8vo. Paris. Hachette, 1874.)

16. And, lastly, let my readers be assured, the economy of blossom and fruit, with the distribution of water, will be found hereafter the most accurate test of wise national government.

For example of the action of a national government, rightly so called, in these matters, I refer the student to the *Marie-golas* of Venice translated in *Fors Clavigera* ; and I close this chapter, and this first volume of *Proserpina*, not without pride, in the words I wrote on this same matter eighteen years ago. "So far as the labourer's immediate profit is concerned, it matters not an iron-filing whether I employ him in growing a peach, or in forging a bombshell. But the difference to him is final, whether, when his child is ill, I walk into his cottage, and give it the peach,—or drop the shell down his chimney, and blow his roof off."

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PLATE IX.—*VIOLA CANINA*.

Fast Sketch, to show Grouping of Leaves.

PROSERPINA.

VOL. II.

CHAPTER I

VIOLA.

1. ALTHOUGH I have not been able in the preceding volume to complete, in any wise as I desired, the account of the several parts and actions of plants in general, I will not delay any longer our entrance on the examination of particular kinds, though here and there I must interrupt such special study by recurring to general principles, or points of wider interest. But the scope of such larger inquiry will be best seen, and the use of it best felt, by entering now on specific study.

I begin with the Violet, because the arrangement of the group to which it belongs—Cytherides—is more arbitrary than that of the rest, and calls for some immediate explanation.

2. I fear that my readers may expect me to write something very pretty for them about violets: but my time for writing prettily is long past; and it requires some watching over myself, I find, to keep me even from writing querulously. For while, the older I grow, very thankfully I recognize more and more the number of pleasures granted to human eyes in this fair world, I recognize also an increasing sensitiveness in my temper to anything that interferes with them; and a grievous readiness to find fault—always of course submissively, but very articulately—with whatever Nature seems to me not to have managed to the best of her power;—as, for extreme instance, her late arrangements of frost this spring, destroying all the

beauty of the wood sorrels; nor am I less inclined, looking to her as the greatest of sculptors and painters, to ask, every time I see a narcissus, why it should be wrapped up in brown paper; and every time I see a violet, what it wants with a spur?

3. What *any* flower wants with a spur, is indeed the simplest and hitherto to me unanswerablest form of the question; nevertheless, when blossoms grow in spires, and are crowded together, and have to grow partly downwards, in order to win their share of light and breeze, one can see some reason for the effort of the petals to expand upwards and backwards also. But that a violet, who has her little stalk to herself, and might grow straight up, if she pleased, should be pleased to do nothing of the sort, but quite gratuitously bend her stalk down at the top, and fasten herself to it by her waist, as it were,—this is so much more like a girl of the period's fancy than a violet's, that I never gather one separately but with renewed astonishment at it.

4. One reason indeed there is, which I never thought of until this moment! a piece of stupidity which I can only pardon myself in, because, as it has chanced, I have studied violets most in gardens, not in their wild haunts,—partly thinking their Athenian honour was as a garden flower; and partly being always led away from them, among the hills, by flowers which I could see nowhere else. With all excuse I can furbish up, however, it is shameful that the truth of the matter never struck me before, or at least this bit of the truth—as follows.

5. The Greeks, and Milton, alike speak of violets as growing in meadows (or dales). But the Greeks did so because they could not fancy any delight except in meadows; and Milton, because he wanted a rhyme to nightingale—and, after all, was London bred. But Viola's beloved knew where violets grew in Illyria,—and grow everywhere else also, when they can,—on a *bank*, facing the south.

Just as distinctly as the daisy and buttercup are *meadow* flowers, the violet is a *bank* flower, and would fain grow always on a steep slope, towards the sun. And it is so poised on its stem that it shows, when growing on a slope, the full space

and opening of its flower,—not at all, in any strain of modesty, hiding *itself*, though it may easily be, by grass or mossy stone, ‘half hidden,’—but, to the full, showing itself, and intending to be lovely and luminous, as fragrant, to the uttermost of its soft power.

Nor merely in its oblique setting on the stalk, but in the reversion of its two upper petals, the flower shows this purpose of being fully seen. (For a flower that *does* hide itself, take a lily of the valley, or the bell of a grape hyacinth, or a cyclamen.) But respecting this matter of petal-reversion, we must now farther state two or three general principles.

6. A perfect or pure flower, as a rose, oxalis, or campanula, is always composed of an unbroken whorl, or corolla, in the form of a disk, cup, bell, or, if it draw together again at the lips, a narrow-necked vase. This cup, bell, or vase, is divided into similar petals, (or segments, which are petals carefully joined,) varying in number from three to eight, and enclosed by a calyx whose sepals are symmetrical also.

An imperfect, or, as I am inclined rather to call it, an ‘injured’ flower, is one in which some of the petals have inferior office and position, and are either degraded, for the benefit of others, or expanded and honoured at the cost of others.

Of this process, the first and simplest condition is the reversal of the upper petals and elongation of the lower ones, in blossoms set on the side of a clustered stalk. When the change is simply and directly dependent on their position in the cluster, as in *Aurora Regina*,* modifying every bell just in proportion as it declines from the perfected central one, some of the loveliest groups of form are produced which can be seen in any inferior organism : but when the irregularity becomes fixed, and the flower is always to the same extent distorted, whatever its position in the cluster, the plant is to be rightly thought of as reduced to a lower rank in creation.

7. It is to be observed, also, that these inferior forms of flower have always the appearance of being produced by some kind of mischief—blight, bite, or ill-breeding ; they never suggest the idea of improving themselves, now, into anything

* Vol. i., p. 162, note.

better ; one is only afraid of their tearing or puffing themselves into something worse. Nay, even the quite natural and simple conditions of inferior vegetable do not in the least suggest, to the unbitten or unblighted human intellect, the notion of development into anything other than their like : one does not expect a mushroom to translate itself into a pineapple, nor a betony to moralize itself into a lily, nor a snapdragon to soften himself into a lilac.

8. It is very possible, indeed, that the recent phrenzy for the investigation of digestive and reproductive operations in plants may by this time have furnished the microscopic malice of botanists with providentially disgusting reasous, or demoniacally nasty necessities, for every possible spur, spike, jag, sting, rent, blotch, flaw, freckle, filth, or venom, which can be detected in the construction, or distilled from the dissolution, of vegetable organism. But with these obscene processes and prurient apparitions the gentle and happy scholar of flowers has nothing whatever to do. I am amazed and saddened, more than I care to say, by finding how much that is abominable may be discovered by an ill-taught curiosity, in the purest things that earth is allowed to produce for us ;—perhaps if we were less reprobate in our own ways, the grass which is our type might conduct itself better, even though *it* has no hope but of being cast into the oven ; in the meantime, healthy human eyes and thoughts are to be set on the lovely laws of its growth and habitation, and not on the mean mysteries of its birth.

9. I relieve, therefore, our presently inquiring souls from any farther care as to the reason for a violet's spur,—or for the extremely ugly arrangements of its stamens and style, invisible unless by vexatious and vicious peeping. You are to think of a violet only in its green leaves, and purple or golden petals ;—you are to know the varieties of form in both, proper to common species ; and in what kind of places they all most fondly live, and most deeply glow.

“ And the recreation of the minde which is taken heereby cannot be but verie good and honest, for they admonish and stir up a man to that which is comely and honest. For

flowers, through their beautie, varietie of colour, and exquisite forme, do bring to a liberall and gentle manly minde the remembrance of honestie, comeliness, and all kinds of vertues. For it would be an unseemely and filthie thing, as a certain wise man saith, for him that doth looke upon and handle faire and beautiful things, and who frequenteth and is conversant in faire and beautiful places, to have his mind not faire, but filthie and deformed."

10. Thus Gerarde, in the close of his introductory notice of the violet,—speaking of things, (honesty, comeliness, and the like,) scarcely now recognized as desirable in the realm of England; but having previously observed that violets are useful for the making of garlands for the head, and posies to smell to;—in which last function I observe they are still pleasing to the British public: and I found the children here, only the other day, munching a confection of candied violet leaves. What pleasure the flower can still give us, uncandied, and unbound, but in its own place and life, I will try to trace through some of its constant laws.

11. And first, let us be clear that the native colour of the violet is violet; and that the white and yellow kinds, though pretty in their place and way, are not to be thought of in generally meditating the flower's quality or power. A white violet is to black ones what a black man is to white ones; and the yellow varieties are, I believe, properly pansies, and belong also to wild districts for the most part; but the true violet, which I have just now called 'black,' with Gerarde, "the blacke or purple violet, hath a great prerogative above others," and all the nobler species of the pansy itself are of full purple, inclining, however, in the ordinary wild violet to blue. In the 'Laws of Fésole,' chap. vii., §§ 20, 21, I have made this dark pansy the representative of purple pure; the *viola odorata*, of the link between that full purple and blue; and the heath-blossom of the link between that full purple and red. The reader will do well, as much as may be possible to him, to associate his study of botany, as indeed all other studies of visible things, with that of painting: but he must remember that he cannot know what violet colour

really is, unless he watch the flower in its *early* growth. It becomes dim in age, and dark when it is gathered—at least, when it is tied in bunches ;—but I am under the impression that the colour actually deadens also,—at all events, no other single flower of the same quiet colour lights up the ground near it as a violet will. The bright hounds-tongue looks merely like a spot of bright paint ; but a young violet glows like painted glass.

12. Which, when you have once well noticed, the two lines of Milton and Shakspeare which seem opposed, will both become clear to you. The said lines are dragged from hand to hand along their pages of pilfered quotations by the hack botanists,—who probably never saw *them*, nor anything else, in Shakspeare or Milton in their lives,—till even in reading them where they rightly come, you can scarcely recover their fresh meaning : but none of the botanists ever think of asking why Perdita calls the violet ‘dim,’ and Milton ‘glowing.’

Perdita, indeed, calls it dim, at that moment, in thinking of her own love, and the hidden passion of it, unspeakable ; nor is Milton without some purpose of using it as an emblem of love, mourning,—but, in both cases, the subdued and quiet hue of the flower as an actual tint of colour, and the strange force and life of it as a part of light, are felt to their uttermost.

And observe, also, that both of the poets contrast the violet, in its softness, with the intense marking of the pansy. Milton makes the opposition directly—

“ the pansy, freaked with jet,
The glowing violet.”

Shakspeare shows yet stronger sense of the difference, in the “purple with Love’s wound” of the pansy, while the violet is sweet with Love’s hidden life, and sweeter than the lids of Juno’s eyes.

Whereupon, we may perhaps consider with ourselves a little, what the difference *is* between a violet and a pansy ?

13. Is, I say, and was, and is to come,—in spite of florists, who try to make pansies round, instead of pentagonal ; and

of the wise classifying people, who say that violets and pansies are the same thing—and that neither of them are of much interest! As, for instance, Dr. Lindley in his ‘Ladies’ Botany.’

“Violets—sweet Violets, and Pansies, or Heartsease, represent a small family, with the structure of which you should be familiar; more, however, for the sake of its singularity than for its extent or importance, for the family is a very small one, and there are but few species belonging to it in which much interest is taken. As the parts of the Heartsease are larger than those of the violet, let us select the former in preference for the subject of our study.” Whereupon we plunge instantly into the usual account of things with horns and tails. “The stamens are five in number—two of them, which are in front of the others, are hidden within the horn of the front petal,” etc., etc., etc. (Note in passing, by the ‘*horn of the front*’ petal he means the ‘*spur of the bottom*’ one, which indeed does stand in front of the rest,—but if therefore it is to be called the *front* petal—which is the back one?) You may find in the next paragraph description of a “singular conformation,” and the interesting conclusion that “no one has yet discovered for what purpose this singular conformation was provided.” But you will not, in the entire article, find the least attempt to tell you the difference between a violet and a pansy!—except in one statement—and that false! “The sweet violet will have no rival among flowers, if we merely seek for delicate fragrance; but her sister, the heartsease, who is destitute of all sweetness, far surpasses her in rich dresses and *gaudy*!!! colours.” The heartsease is not without sweetness. There are sweet pansies scented, and dog pansies unscented—as there are sweet violets scented, and dog violets unscented. What is the real difference?

14. I turn to another scientific gentleman—*more* scientific in form indeed, Mr. Grindon,—and find, for another interesting phenomenon in the violet, that it sometimes produces flowers without any petals! and in the pansy, that “the flowers turn towards the sun, and when many are open at once, present a droll appearance, looking like a number of faces all

on the 'qui vive.'" But nothing of the difference between them, except something about 'stipules,' of which "it is important to observe that the leaves should be taken from the middle of the stem—those above and below being variable."

I observe, however, that Mr. Grindon *has* arranged his violets under the letter A, and his pansies under the letter B, and that something may be really made out of him, with an hour or two's work. I am content, however, at present, with his simplifying assurance that of violet and pansy together, "six species grow wild in Britain—or, as some believe, only four—while the analysts run the number up to fifteen."

15. Next I try Loudon's Cyclopædia, which, through all its 700 pages, is equally silent on the business; and next, Mr. Baxter's 'British Flowering Plants,' in the index of which I find neither Pansy nor Heartsease, and only the 'Calathian' Violet, (where on earth is Calathia?) which proves, on turning it up, to be a Gentian.

16. At last, I take my Figuier, (but what should I do if I only knew English?) and find this much of clue to the matter:—

"Qu'est ce que c'est que la Pensée? Cette jolie plante appartient aussi au genre *Viola*, mais à un section de ce genre. En effet, dans les Pensées, les pétales supérieurs et latéraux sont dirigés en haut, l'inférieur seul est dirigé en bas: et de plus, le stigmate est urcéole, globuleux."

And farther, this general description of the whole violet tribe, which I translate, that we may have its full value:—

"The violet is a plant without a stem (tige),—(see vol. i., p. 108,)—whose height does not surpass one or two decimetres. Its leaves, radical, or carried on stolons, (vol. i., p. 111,) are sharp, or oval, crenulate, or heart-shape. Its stipules are oval-acuminate, or lanceolate. Its flowers, of sweet scent, of a dark violet or a reddish blue, are carried each on a slender peduncle, which bends down at the summit. Such is, for the botanist, the Violet, of which the poets would give assuredly another description."

17. Perhaps; or even the painters! or even an ordinary



unbotanical human creature ! I must set about my business, at any rate, in my own way, now, as I best can, looking first at things themselves, and then putting this and that together, out of these botanical persons, which they can't put together out of themselves. And first, I go down into my kitchen garden, where the path to the lake has a border of pansies on both sides all the way down, with clusters of narcissus behind them. And pulling up a handful of pansies by the roots, I find them "without stems," indeed, if a stem means a wooden thing ; but I should say, for a low-growing flower, quite lankily and disagreeably stalky ! And, thinking over what I remember about wild pansies, I find an impression on my mind of their being rather more stalky, always, than is quite graceful ; and, for all their fine flowers, having rather a weedy and littery look, and getting into places where they have no business. See, again, vol. i., chap. vi., § 5.

18. And now, going up into my flower and fruit garden, I find (June 2nd, 1881, half-past six, morning,) among the wild saxifrages, which are allowed to grow wherever they like, and the rock strawberries, and Francescas, which are coaxed to grow wherever there is a bit of rough ground for them, a bunch or two of pale pansies, or violets, I don't know well which, by the flower ; but the entire company of them has a ragged, jagged, unpurpose-like look ; extremely,—I should say,—demoralizing to all the little plants in their neighbourhood : and on gathering a flower, I find it is a nasty big thing, all of a feeble blue, and with two things like horns, or thorns, sticking out where its ears would be, if the pansy's frequently monkey face were underneath them. Which I find to be two of the leaves of its calyx 'out of place,' and, at all events, for their part, therefore, weedy, and insolent.

19. I perceive, farther, that this disorderly flower is lifted on a lanky, awkward, springless, and yet stiff flower-stalk ; which is not round, as a flower-stalk ought to be, (vol. i., p. 235,) but obstinately square, and fluted, with projecting edges, like a pillar run thin out of an iron-foundry for a cheap railway station. I perceive also that it has set on it, just before turning down to carry the flower, two little jaggy and in-

definable leaves,—their colour a little more violet than the blossom.

These, and such undeveloping leaves, wherever they occur, are called 'bracts' by botanists, a good word, from the Latin 'bractea,' meaning a piece of metal plate, so thin as to crackle. They seem always a little stiff, like bad parchment,—born to come to nothing—a sort of infinitesimal fairy-lawyer's deed. They ought to have been in my index at p. 237, under the head of leaves, and are frequent in flower structure,—never, as far as one can see, of the smallest use. They are constant, however, in the flower-stalk of the whole violet tribe.

20. I perceive, farther, that this lanky flower-stalk, bending a little in a crabbed, broken way, like an obstinate person tired, pushes itself up out of a still more stubborn, nondescript, hollow angular, dogs-eared gaspipe of a stalk, with a section something like this,  but no bigger than  with

a quantity of ill-made and ill-hemmed leaves on it, of no describable leaf-cloth or texture,—not cressic, (though the thing does altogether look a good deal like a quite uneatable old watercress); not salvian, for there's no look of warmth or comfort in them; not cauline, for there's no juice in them; not dryad, for there's no strength in them, nor apparent use: they seem only there, as far as I can make out, to spoil the flower, and take the good out of my garden bed. Nobody in the world could draw them, they are so mixed up together, and crumpled and hacked about, as if some ill-natured child had snipped them with blunt scissors, and an ill-natured cow chewed them a little afterwards and left them, proving far too tough or too bitter.

21. Having now sufficiently observed, it seems to me, this incongruous plant, I proceed to ask myself, over it, M. Figuier's question, 'Qu'est-ce c'est qu'un Pensée?' Is this a violet—or a pansy—or a bad imitation of both?

Whereupon I try if it has any scent: and to my much surprise, find it has a full and soft one—which I suppose is what my gardener keeps it for! According to Dr. Lindley, then,

it must be a violet! But according to M. Figuier,—let me see, do its middle petals bend up, or down?

I think I'll go and ask the gardener what *he* calls it.

22. My gardener, on appeal to him, tells me it is the 'Viola Cornuta,' but that he does not know himself if it is violet or pansy. I take my Loudon again, and find there were fifty three species of violets, known in his days, of which, as it chances, Cornuta is exactly the last.

'Horned violet': I said the green things were *like* horns!—but what is one to say of, or to do to, scientific people, who first call the spur of the violet's petal, horn, and then its calyx points, horns, and never define a 'horn' all the while!

Viola Cornuta, however, let it be; for the name does mean something, and is not false Latin. But whether violet or pansy, I must look farther to find out.

23. I take the Flora Danica, in which I at least am sure of finding whatever is done at all, done as well as honestly and care can; and look what species of violets it gives.

Nine, in the first ten volumes of it; four in their modern sequel (that I know of,—I have had no time to examine the last issues). Namely, in alphabetical order, with their present Latin, or tentative Latin, names; and in plain English, the senses intended by the hapless scientific people, in such their tentative Latin:—

(1)	Viola Arvensis	Field (Violet)	No. 1748
(2)	" Biflora.	Two-flowered	46
(3)	" Canina.	Dog	1453
(3B)	" Canina. Var. Multicaulis (many-stemmed), a very singular sort of violet—if it were so! Its real difference from our dog- violet is in being pale blue, and having a golden centre		2646
(4)	" Hirta.	Hairy	618
(5)	" Mirabilis.	Marvellous	1045
(6)	" Montana.	Mountain	1329
(7)	" Odorata.	Odorous	309
(8)	" Palustris.	Marshy	83

(9)	<i>Viola Tricolor.</i>	Three-coloured	623
(9B)	" <i>Tricolor.</i>	Var. <i>Arenaria</i> , Sandy Three-coloured	2647
(10)	" <i>Elatior.</i>	Taller	68
(11)	" <i>Epipsila.</i>	(Heaven knows what: it is Greek, not Latin, and looks as if it meant something between a bishop and a short letter e)	2405

I next run down this list, noting what names we can keep, and what we can't; and what aren't worth keeping, if we could: passing over the varieties, however, for the present, wholly.

- (1) *Arvensis.* Field-violet. Good.
- (2) *Biflora.* A good epithet, but in false Latin. It is to be our *Viola aurea*, golden pansy.
- (3) *Canina.* Dog. Not pretty, but intelligible, and by common use now classical. Must stay.
- (4) *Hirta.* Late Latin slang for *hirsuta*, and always used of nasty places or nasty people; it shall not stay. The species shall be our *Viola Seclusa*,—Monk's violet—meaning the kind of monk who leads a rough life like Elijah's, or the Baptist's, or Esau's—in another kind. This violet is one of the loveliest that grows.
- (5) *Mirabilis.* Stays so; marvellous enough, truly: not more so than all violets; but I am very glad to hear of scientific people capable of admiring anything.
- (6) *Montana.* Stays so.
- (7) *Odorata.* Not distinctive;—nearly classical, however. It is to be our *Viola Regina*, else I should not have altered it.
- (8) *Palustris.* Stays so.
- (9) *Tricolor.* True, but intolerable. The flower is the queen of the true pansies: to be our *Viola Psyche*.
- (10) *Elatior.* Only a variety of our already accepted *Cornuta*.

(11) The last is, I believe, also only a variety of *Palustris*. Its leaves, I am informed in the text, are either “pubescent-reticulate-venose-subreniform,” or “lato-cordate-repando-crenate;” and its stipules are “ovate-acuminate-fimbrio-denticulate.” I do not wish to pursue the inquiry farther.

24. These ten species will include, noting here and there a local variety, all the forms which are familiar to us in Northern Europe, except only two;—these, as it singularly chances, being the *Viola Alpium*, noblest of all the wild pansies in the world, so far as I have seen or heard of them,—of which, consequently, I find no picture, nor notice, in any botanical work whatsoever; and the other, the rock-violet of our own Yorkshire hills.

We have therefore, ourselves, finally then, twelve following species to study. I give them now all in their accepted names and proper order,—the reasons for occasional difference between the Latin and English name will be presently given.

- | | | |
|------|----------------------|--------------------|
| (1) | <i>Viola Regina.</i> | Queen violet. |
| (2) | “ <i>Psyche.</i> | Ophelia’s pansy. |
| (3) | “ <i>Alpium.</i> | Freneli’s pansy. |
| (4) | “ <i>Aurea.</i> | Golden violet. |
| (5) | “ <i>Montana.</i> | Mountain violet. |
| (6) | “ <i>Mirabilis.</i> | Marvellous violet. |
| (7) | “ <i>Arvensis.</i> | Field violet. |
| (8) | “ <i>Palustris.</i> | Marsh violet. |
| (9) | “ <i>Seclusa.</i> | Monk’s violet. |
| (10) | “ <i>Canina.</i> | Dog violet. |
| (11) | “ <i>Cornuta.</i> | Cow violet. |
| (12) | “ <i>Rupestris.</i> | Crag violet. |

25. We will try, presently, what is to be found out of useful, or pretty, concerning all these twelve violets; but must first find out how we are to know which are violets indeed, and which, pansies.

Yesterday, after finishing my list, I went out again to examine *Viola Cornuta* a little closer, and pulled up a full grip of it by the roots, and put it in water in a wash-hand basin, which it filled like a truss of green hay.

Pulling out two or three separate plants, I find each to consist mainly of a jointed stalk of a kind I have not yet described,—roughly, some two feet long altogether; (accurately, one 1 ft. 10½ in.; another, 1 ft. 10 in.; another, 1 ft. 9 in.—but all these measures taken without straightening, and therefore about an inch short of the truth), and divided into seven or eight lengths by clumsy joints where the mangled leafage is knotted on it; but broken a little out of the way at each joint, like a rheumatic elbow that won't come straight, or bend farther; and—which is the most curious point of all in it—it is thickest in the middle, like a viper, and gets quite thin to the root and thin towards the flower; also the lengths between the joints are longest in the middle: here I give them in inches, from the root upwards, in a stalk taken at random.

1st (nearest root)	. . . . .	0¾
2nd	. . . . .	0¾
3rd	. . . . .	1½
4th	. . . . .	1¾
5th	. . . . .	3
6th	. . . . .	4
7th	. . . . .	3½
8th	. . . . .	3
9th	. . . . .	2½
10th	. . . . .	1½

1 ft. 9¾ in.

But the thickness of the joints and length of terminal flower stalk bring the total to two feet and about an inch over. I dare not pull it straight, or should break it, but it overlaps my two-foot rule considerably, and there are two inches besides of root, which are merely underground stem, very thin and wretched, as the rest of it is merely root above ground,

very thick and bloated. (I begin actually to be a little awed at it, as I should be by a green snake—only the snake would be prettier.) The flowers also, I perceive, have not their two horns regularly set in, but the five spiky calyx-ends stick out between the petals—sometimes three, sometimes four, it may be all five up and down—and produce variously fanged or forked effects, feebly ophidian or diabolic. On the whole, a plant entirely mismanaging itself,—reprehensible and awkward, with taints of worse than awkwardness; and clearly, no true ‘species,’ but only a link.* And it really is, as you will find presently, a link in two directions; it is half violet, half pansy, a ‘cur’ among the Dogs, and a thoughtless thing among the thoughtful. And being so, it is also a link between the entire violet tribe and the Runners—pease, strawberries, and the like, whose glory is in their speed; but a violet has no business whatever to run anywhere, being appointed to stay where it was born, in extremely contented (if not secluded) places. “Half-hidden from the eye?”—no; but desiring attention, or extension, or corpulence, or connection with anybody else’s family, still less.

26. And if, at the time you read this, you can run out and gather a *true* violet, and its leaf, you will find that the flower grows from the very ground, out of a cluster of heart-shaped leaves, becoming here a little rounder, there a little sharper, but on the whole heart-shaped, and that is the proper and essential form of the violet leaf. You will find also that the flower has five petals; and being held down by the bent stalk, two of them bend back and up, as if resisting it; two expand at the sides; and one, the principal, grows downwards, with its attached spur behind. So that the front view of the flower must be *some* modification of this typical arrangement, Fig. M, (for middle form). Now the statement above quoted from Figuier, § 16, means, if he had been able to express himself, that the two lateral petals in the violet are directed downwards, Fig. 11. A, and in the pansy upwards, Fig. 11. C. And that, in the main, is true, and to be fixed well and clearly in your mind. But in the real orders, one

* See ‘Deucalion,’ vol. ii., chap. i., p. 13, § 18.

flower passes into the other through all kinds of intermediate positions of petal, and the plurality of species are of the middle type, Fig. II. B.*

27. Next, if you will gather a real pansy *leaf*, you will find it—not heart-shape in the least, but sharp oval or spear-shape, with two deep cloven lateral flakes at its springing from the stalk, which, in ordinary aspect, give the plant the haggled and draggled look I have been vilifying it for. These, and such as these, “leaflets at the base of other leaves” (Balfour’s Glossary), are called by botanists ‘stipules.’ I have not allowed the word yet, and am doubtful of allowing it, because it entirely confuses the student’s sense of the Latin ‘stipula’ (see above, vol. i., chap. viii., § 27) doubly and trebly important in its connection with ‘stipulor,’ not noticed in that paragraph, but readable in your large Johnson; we shall have more to say of it when we come to ‘straw’ itself.



A



B



C

FIG. II.

28. In the meantime, one *may* think of these things as stipulations for leaves, not fulfilled, or ‘stumps’ or ‘sumphs’ of leaves! But I think I can do better for them. We have already got the idea of *crested* leaves, (see vol. i., plate); now, on each side of a knight’s crest, from earliest Etruscan times down to those of the Scalas, the fashion of armour held, among the nations who wished to make themselves terrible in aspect, of putting cut plates or ‘bracts’ of metal, like dragons’ wings, on each side of the crest. I believe the custom never became Norman or English; it is essentially Greek, Etruscan, or Italian,—the Norman and Dane always wearing a practical cone (see the coins of Canute), and the Frank or English knights the severely plain beavered helmet; the Black Prince’s at Canterbury, and Henry V.’s at Westminster, are kept hitherto by the great fates for us to see. But the Southern knights constantly wore these lateral dragon’s wings;

* I am ashamed to give so rude outlines; but every moment now is valuable to me: careful outline of a dog-violet is given in Plate X.



PLATE X.—*VIOLA CANINA*. STRUCTURAL DETAILS.

and if I can find their special name, it may perhaps be substituted with advantage for 'stipule'; but I have not wit enough by me just now to invent a term.

29. Whatever we call them, the things themselves are, throughout all the species of violets, developed in the running and weedy varieties, and much subdued in the beautiful ones; and generally the pansies have them large, with spear-shaped central leaves; and the violets small, with heart-shaped leaves, for more effective decoration of the ground. I now note the characters of each species in their above given order.

30. I. VIOLA REGINA. Queen-Violet. Sweet Violet. 'Viola Odorata,' L., Flora Danica, and Sowerby. The latter draws it with golden centre and white base of lower petal; the Flora Danica, all purple. It is sometimes altogether white. It is seen most perfectly for setting off its colour, in group with primrose,—and most luxuriantly, so far as I know, in hollows of the Savoy limestones, associated with the pervenche, which embroiders and illumines them all over. I believe it is the earliest of its race, sometimes called 'Martia,' March violet. In Greece and South Italy even a flower of the winter.

"The Spring is come, the violet's gone,
The first-born child of the early sun.
With us, she is but a winter's flower;
The snow on the hills cannot blast her bower,
And she lifts up her dewy eye of blue
To the youngest sky of the selfsame hue.
And when the Spring comes, with her host
Of flowers, that flower beloved the most
Shrinks from the crowd that may confuse
Her heavenly odour, and virgin hues.
Pluck the others, but still remember
Their herald out of dim December,—
The morning star of all the flowers,
The pledge of daylight's lengthened hours,
Nor, midst the roses, e'er forget
The virgin, virgin violet." *

* A careless bit of Byron's, (the last song but one in the 'Deformed Transformed'); but Byron's most careless work is better, by its innate

31. It is the queen, not only of the violet tribe, but of all low-growing flowers, in sweetness of scent—variously applicable and serviceable in domestic economy :—the scent of the lily of the valley seems less capable of preservation or use.

But, respecting these perpetual beneficences and benignities of the sacred, as opposed to the malignant, herbs, whose poisonous power is for the most part restrained in them, during their life, to their juices or dust, and not allowed sensibly to pollute the air, I should like the scholar to re-read pp. 240, 241 of vol. i., and then to consider with himself what a grotesquely warped and gnarled thing the modern scientific mind is, which fiercely busies itself in venomous chemistries that blast every leaf from the forests ten miles round ; and yet cannot tell us, nor even think of telling us, nor does even one of its pupils think of asking it all the while, how a violet throws off her perfume !—far less, whether it might not be more wholesome to ‘treat’ the air which men are to breathe in masses, by administration of vale-lilies and violets, instead of charcoal and sulphur !

The closing sentence of the first volume just now referred to—p. 243—should also be re-read ; it was the sum of a chapter I had in hand at that time on the Substances and Essences of Plants—which never got finished ;—and in trying to put it into small space, it has become obscure : the terms “logically inexplicable” meaning that no words or process of comparison will define scents, nor do any traceable modes of sequence or relation connect them ; each is an independent power, and gives a separate impression to the senses. Above all, there is no logic of pleasure, nor any assignable reason for the difference, between loathsome and delightful scent, which makes the fungus foul and the vervain sacred : but one practical conclusion I (who am in all final ways the most prosaic and practical of human creatures) do very solemnly beg my readers to meditate ; namely, that although not recognized by

energy, than other people’s most laboured. I suppress, in some doubts about my ‘digamma,’ notes on the Greek violet and the Ion of Euripides ;—which the reader will perhaps be good enough to fancy a serious loss to him, and supply for himself.

actual offensiveness of scent, there is no space of neglected land which is not in some way modifying the atmosphere of *all the world*,—it may be, beneficently, as heath and pine,—it may be, malignantly, as Pontine marsh or Brazilian jungle ; but, in one way or another, for good and evil constantly, by day and night, the various powers of life and death in the plants of the desert are poured into the air, as vials of continual angels : and that no words, no thoughts can measure, nor imagination follow, the possible change for good which energetic and tender care of the wild herbs of the field and trees of the wood might bring, in time, to the bodily pleasure and mental power of Man.

32. II. VIOLA PSYCHE. Ophelia's Pansy.

The wild heart's-ease of Europe ; its proper colour an exquisitely clear purple in the upper petals, gradated into deep blue in the lower ones ; the centre, gold. Not larger than a violet, but perfectly formed, and firmly set in all its petals. Able to live in the driest ground ; beautiful in the coast sandhills of Cumberland, following the wild geranium and burnet rose : and distinguished thus by its power of life, in waste and dry places, from the violet, which needs kindly earth and shelter.

Quite one of the most lovely things that Heaven has made, and only degraded and distorted by any human interference ; the swollen varieties of it produced by cultivation being all gross in outline and coarse in colour by comparison.

It is badly drawn even in the 'Flora Danica,' No. 623, considered there apparently as a species escaped from gardens ; the description of it being as follows :—

"*Viola tricolor hortensis repens, flore purpureo et cœruleo, C. B. P., 199.*" (I don't know what C. B. P. means.) "*Pas-sim, juxta villas.*"

"*Viola tricolor, caule triquetro diffuso, foliis oblongis incisis, stipulis pinnatifidis,*" Linn. *Systema Naturæ*, 185.

33. "Near the country farms"—does the Danish botanist mean?—the more luxuriant weedy character probably acquired by it only in such neighbourhood ; and, I suppose, various confusion and degeneration possible to it beyond other

plants when once it leaves its wild home. It is given by Sibthorpe from the Trojan Olympus, with an exquisitely delicate leaf; the flower described as "triste et pallide violaceus," but coloured in his plate full purple; and as he does not say whether he went up Olympus to gather it himself, or only saw it brought down by the assistant whose lovely drawings are yet at Oxford, I take leave to doubt his epithets. That this should be the only Violet described in a 'Flora Græca' extending to ten folio volumes, is a fact in modern scientific history which I must leave the Professor of Botany and the Dean of Christ Church to explain.

34. The English varieties seem often to be yellow in the lower petals, (see Sowerby's plate, 1287 of the old edition); crossed, I imagine, with *Viola Aurea*, (but see under *Viola Rupestris*, No. 12); the names, also, varying between tricolor and bicolor—with no note anywhere of the three colours, or two colours, intended!

The old English names are many.—'Love in idleness,'—making Lysander, as Titania, much wandering in mind, and for a time mere 'Kits run the street' (or run the wood?)—"Call me to you" (Gerarde, ch. 299, Sowerby, No. 178), with 'Herb Trinity,' from its three colours, blue, purple, and gold, variously blended in different countries? 'Three faces under a hood' describes the English variety only. Said to be the ancestress of all the florists' pansies, but this I much doubt, the next following species being far nearer the forms most chiefly sought for.

35. III. *VIOLA ALPINA*. 'Freneli's Pansy'—my own name for it, from Gotthelf's Freneli, in 'Ulric the Farmer'; the entirely pure and noble type of the Bernese maid, wife, and mother.

The pansy of the Wengern Alp in specialty, and of the higher, but still rich, Alpine pastures. Full dark-purple; at least an inch across the expanded petals; I believe, the '*Mater Violarum*' of Gerarde; and true black violet of Virgil, remaining in Italian '*Viola Mammola*' (Gerarde, ch. 298).

36. IV. *VIOLA AUREA*. Golden Violet. Biflora usually; but its brilliant yellow is a much more definite characteristic; and

needs insisting on, because there is a 'Viola lutea' which is not yellow at all ; named so by the garden-florists. My Viola aurea is the Rock-violet of the Alps ; one of the bravest, brightest, and dearest of little flowers. The following notes upon it, with its summer companions, a little corrected from my diary of 1877, will enough characterize it.

"June 7th.—The cultivated meadows now grow only dandelions—in frightful quantity too ; but, for wild ones, primula, bell gentian, golden pansy, and anemone,—Primula farinosa in mass, the pansy pointing and vivifying in a petulant sweet way, and the bell gentian here and there deepening all,—as if indeed the sound of a deep bell among lighter music.

"Counted in order, I find the effectively constant flowers are eight ; * namely,

"1. The golden anemone, with richly cut large leaf ; primrose colour, and in masses like primrose, studded through them with bell gentian, and dark purple orchis.

"2. The dark purple orchis, with bell gentian in equal quantity, say six of each in square yard, broken by sparklings of the white orchis and the white grass flower ; the richest piece of colour I ever saw, touched with gold by the geum.

"3 and 4. These will be white orchis and the grass flower. †

"5. Geum—everywhere, in deep, but pure, gold, like pieces of Greek mosaic.

"6. Soldanella, in the lower meadows, delicate, but not here in masses.

"7. Primula Alpina, divine in the rock clefts, and on the ledges changing the grey to purple,—set in the dripping caves with . .

"8. Viola (pertinax—pert) ; I want a Latin word for various studies—failures all—to express its saucy little stuck-up way,

* Nine ; I see that I missed count of P. farinosa, the most abundant of all.

† "A feeble little quatrefoil—growing one on the stem, like a Parnassia, and looking like a Parnassia that had dropped a leaf. I think it drops one of its own four, mostly, and lives as three-fourths of itself, for most of its time. Stamens pale gold. Root-leaves, three or four, grass-like ; growing among the moist moss chiefly."

and exquisitely trim peltate leaf. I never saw such a lovely perspective line as the pure front leaf profile. Impossible also to get the least of the spirit of its lovely dark brown fibre markings. Intensely golden these dark fibres, just browning the petal a little between them."

And again in the defile of Gondo, I find "*Viola (saxatilis?)* name yet wanted ;—in the most delicate studding of its round leaves, like a small fern more than violet, and bright sparkle of small flowers in the dark dripping hollows. Assuredly delights in shade and distilling moisture of rocks."

I found afterwards a much larger yellow pansy on the Yorkshire high limestones ; with vigorously black crowfoot marking on the lateral petals.

37. V. *VIOLA MONTANA*. Mountain Violet.

Flora Danica, 1329. Linnaeus, No. 13, "*Caulibus erectis, foliis cordato-lanceolatis, floribus serioribus apetalis,*" *i.e.*, on erect stems, with leaves long heart-shape, and its later flowers without petals—not a word said of its earlier flowers which have got those unimportant appendages ! In the plate of the *Flora* it is a very perfect transitional form between violet and pansy, with beautifully firm and well-curved leaves, but the colour of blossom very pale. "*In subalpinis Norvegiæ passim,*" all that we are told of it, means I suppose, in the lower Alpine pastures of Norway ; in the *Flora Suecica*, p. 306, *habitat in Lapponica, juxta Alpes.*

38. VI. *VIOLA MIRABILIS*. *Flora Danica*, 1045. A small and exquisitely formed flower in the balanced cinquefoil intermediate between violet and pansy, but with large and superbly curved and pointed leaves. It is a mountain violet, but belonging rather to the mountain woods than meadows. "*In sylvaticis in Toten, Norvegiæ.*"

Loudon, 3056, "*Broad-leaved : Germany.*"

Linnaeus, *Flora Suecica*, 789, says that the flowers of it which have perfect corolla and full scent often bear no seed, but that the later 'cauline' blossoms, without petals, are fertile. "*Caulini vero apetali fertiles sunt, et seriores. Habitat passim Upsaliæ.*"

I find this, and a plurality of other species, indicated by

Linnaeus as having triangular stalks, "*caule triquetro*," meaning, I suppose, the kind sketched in Figure 1 above.

39. VII. VIOLA ARVENSIS. Field Violet. *Flora Danica*, 1748. A coarse running weed; nearly like *Viola Cornuta*, but feebly lilac and yellow in colour. In dry fields, and with corn.

Flora Suecica, 791; under titles of *Viola 'tricolor'* and '*bicolor arvensis*,' and *Herba Trinitatis*. Habitat ubique in *sterilibus arvis*: "*Planta vix datur in qua evidentius perspicitur generationis opus, quam in hujus cavo apertoque stigmatē.*"

It is quite undeterminable, among present botanical instructors, how far this plant is only a rampant and over-indulged condition of the true pansy (*Viola Psyche*); but my own scholars are to remember that the true pansy is full purple and blue with golden centre; and that the disorderly field varieties of it, if indeed not scientifically distinguishable, are entirely separate from the wild flower by their scattered form and faded or altered colour. I follow the *Flora Danica* in giving them as a distinct species.

40. VIII. VIOLA PALUSTRIS. Marsh Violet. *Flora Danica*, 83. As there drawn, the most finished and delicate in form of all the violet tribe; warm white, streaked with red; and as pure in outline as an oxalis, both in flower and leaf; it is like a violet imitating oxalis and anagallis.

In the *Flora Suecica*, the petal-markings are said to be black; in '*Viola lactea*' a connected species, (Sowerby, 45,) purple. Sowerby's plate of it under the name '*palustris*' is pale purple veined with darker; and the spur is said to be '*honey-bearing*,' which is the first mention I find of honey in the violet. The habitat given, sandy and turfy heaths. It is said to grow plentifully near Croydon.

Probably, therefore, a violet belonging to the chalk, on which nearly all herbs that grow wild—from the grass to the bluebell—are singularly sweet and pure. I hope some of my botanical scholars will take up this question of the effect of different rocks on vegetation, not so much in bearing different species of plants, as different characters of each species.*

* The great work of Lecoq, '*Géographie Botanique*,' is of priceless value; but treats all on too vast a scale for our purposes.

41. IX. VIOLA SECLUSA. Monk's Violet. "Hirta," *Flora Danica*, 618, "In fruticetis raro." A true wood violet, full but dim in purple. Sowerby, 894, makes it paler. The leaves very pure and severe in the Danish one;—longer in the English. "Clothed on both sides with short, dense, hoary hairs."

Also belongs to chalk or limestone only (Sowerby).

X. VIOLA CANINA. Dog Violet. I have taken it for analysis in my two plates, because its grace of form is too much despised, and we owe much more of the beauty of spring to it, in English mountain ground, than to the Regina.

XI. VIOLA CORNUTA. Cow Violet. Enough described already.

XII. VIOLA RUPESTRIS. Crag Violet. On the high limestone moors of Yorkshire, perhaps only an English form of *Viola Aurea*, but so much larger, and so different in habit—growing on dry breezy downs, instead of in dripping caves—that I allow it, for the present, separate name and number.*

42. 'For the present,' I say all this work in 'Proserpina' being merely tentative, much to be modified by future students, and therefore quite different from that of 'Deucalion,' which is authoritative as far as it reaches, and will stand out like a quartz dyke, as the sandy speculations of modern gossiping geologists get washed away.

But in the meantime, I must again solemnly warn my girl-readers against all study of floral genesis and digestion. How far flowers invite, or require, flies to interfere in their family affairs—which of them are carnivorous—and what forms of pestilence or infection are most favourable to some vegetable and animal growths,—let them leave the people to settle who like, as Toinette says of the Doctor in the 'Malade Imaginaire'—"y mettre le nez." I observe a paper in the last 'Contemporary Review,' announcing for a discovery patent to all mankind that the colours of flowers were made "to attract insects"! †

* It is, I believe, Sowerby's *Viola Lutea*, 721 of the old edition, there painted with purple upper petals; but he says in the text, "Petals either all yellow, or the two uppermost are of a blue purple, the rest yellow with a blue tinge: very often the whole are purple."

† Did the wretch never hear bees in a lime tree then, or ever see one on a star gentian?

They will next hear that the rose was made for the canker, and the body of man for the worm.

43. What the colours of flowers, or of birds, or of precious stones, or of the sea and air, and the blue mountains, and the evening and the morning, and the clouds of Heaven, were given for—they only know who can see them and can feel, and who pray that the sight and the love of them may be prolonged, where cheeks will not fade, nor sunsets die.

44. And now, to close, let me give you some fuller account of the reasons for the naming of the order to which the violet belongs, 'Cytherides.'

You see that the Uranides, are, as far as I could so gather them, of the pure blue of the sky ; but the Cytherides of altered blue;—the first, Viola, typically purple ; the second, Veronica, pale blue with a peculiar light ; the third, Giulietta, deep blue, passing strangely into a subdued green before and after the full life of the flower.

All these three flowers have great strangenesses in them, and weaknesses ; the Veronica most wonderful in its connection with the poisonous tribe of the foxgloves ; the Giulietta, alone among flowers in the action of the shielding leaves ; and the Viola, grotesque and inexplicable in its hidden structure, but the most sacred of all flowers to earthly and daily Love, both in its scent and glow.

Now, therefore, let us look completely for the meaning of the two leading lines,—

“ Sweeter than the lids of Juno's eyes,
Or Cytherea's breath.”

45. Since, in my present writings, I hope to bring into one focus the pieces of study fragmentarily given during past life, I may refer my readers to the first chapter of the 'Queen of the Air' for the explanation of the way in which all great myths are founded, partly on physical, partly on moral fact,—so that it is not possible for persons who neither know the aspect of nature, nor the constitution of the human soul, to understand a word of them. Naming the Greek Gods, therefore, you have first to think of the physical power they repre-

sent. When Horace calls Vulcan 'Avidus,' he thinks of him as the power of Fire; when he speaks of Jupiter's red right hand, he thinks of him as the power of rain with lightning; and when Homer speaks of Juno's dark eyes, you have to remember that she is the softer form of the rain power, and to think of the fringes of the rain-cloud across the light of the horizon. Gradually the idea becomes personal and human in the "Dove's eyes within thy locks,"* and "Dove's eyes by the river of waters" of the Song of Solomon.

46. "Or Cytherea's breath,"—the two thoughts of softest glance, and softest kiss, being thus together associated with the flower: but note especially that the Island of Cythera was dedicated to Venus because it was the chief, if not the only Greek island, in which the purple fishery of Tyre was established; and in our own minds should be marked not only as the most southern fragment of true Greece, but the virtual continuation of the chain of mountains which separate the Spartan from the Argive territories, and are the natural home of the brightest Spartan and Argive beauty which is symbolized in Helen.

47. And, lastly, in accepting for the order this name of Cytherides, you are to remember the names of Viola and Julietta, its two limiting families, as those of Shakspeare's two most loving maids—the two who love simply, and to the death: as distinguished from the greater natures in whom earthly Love has its due part, and no more; and farther still from the greatest, in whom the earthly love is quiescent, or subdued, beneath the thoughts of duty and immortality.

It may be well quickly to mark for you the levels of loving temper in Shakspeare's maids and wives, from the greatest to the least.

48. 1. Isabel. All earthly love, and the possibilities of it, held in absolute subjection to the laws of God, and the judgments of His will. She is Shakspeare's only 'Saint.' Queen Catherine, whom you might next think of, is only an ordinary

* Septuagint, "the eyes of doves out of thy silence." Vulgate, "the eyes of doves, besides that which is hidden in them." Meaning—the *dim* look of love, beyond all others in sweetness.

woman of trained religious temper :—her maid of honour gives Wolsey a more Christian epitaph.

2. Cordelia. The earthly love consisting in diffused compassion of the universal spirit ; not in any conquering, personally fixed, feeling.

“ Mine enemy’s dog,
Though he had bit me, should have stood that night
Against my fire.”

These lines are spoken in her hour of openest direct expression ; and are *all* Cordelia.

Shakspeare clearly does not mean her to have been supremely beautiful in person ; it is only her true lover who calls her ‘ fair ’ and ‘ fairest ’—and even that, I believe, partly in courtesy, after having the instant before offered her to his subordinate duke ; and it is only *his* scorn of her which makes France fully care for her.

“ Gods, Gods, ’tis strange that from their cold neglect
My love should kindle to inflamed respect ! ”

Had she been entirely beautiful, he would have honoured her as a lover should, even before he saw her despised ; nor would she ever have been so despised—or by her father, misunderstood. Shakspeare himself does not pretend to know where her girl-heart was,—but I should like to hear how a great actress would say the “ Peace be with Burgundy ! ”

3. Portia. The maidenly passion now becoming great, and chiefly divine in its humility, is still held absolutely subordinate to duty ; no thought of disobedience to her dead father’s intention is entertained for an instant, though the temptation is marked as passing, for that instant, before her crystal strength. Instantly, in her own peace, she thinks chiefly of her lover’s ;—she is a perfect Christian wife in a moment, coming to her husband with the gift of perfect Peace,—

“ Never shall you lie by Portia’s side
With an unquiet soul.”

She is highest in intellect of all Shakspeare’s women, and this is the root of her modesty ; her ‘ unlettered girl ’ is like

Newton's simile of the child on the sea-shore. Her perfect wit and stern judgment are never disturbed for an instant by her happiness : and the final key to her character is given in her silent and slow return from Venice, where she stops at every wayside shrine to pray.

4. Hermione. Fortitude and Justice personified, with unwearying affection. She is Penelope, tried by her husband's fault as well as error.

5. Virgilia. Perfect type of wife and mother, but without definiteness of character, nor quite strength of intellect enough entirely to hold her husband's heart. Else, she had saved him : he would have left Rome in his wrath—but not her. Therefore, it is his mother only who bends him : but she cannot save.

6. Imogen. The ideal of grace and gentleness ; but weak ; enduring too mildly, and forgiving too easily. But the piece is rather a pantomime than play, and it is impossible to judge of the feelings of St. Columba, when she must leave the stage in half a minute after mistaking the headless clown for headless Arlecchino.

7. Desdemona, Ophelia, Rosalind. They are under different conditions from all the rest, in having entirely heroic and faultless persons to love. I can't class them, therefore,—fate is too strong, and leaves them no free will.

8. Perdita, Miranda. Rather mythic visions of maiden beauty than mere girls.

9. Viola and Juliet. Love the ruling power in the entire character : wholly virginal and pure, but quite earthly, and recognizing no other life than his own. Viola is, however, far the noblest. Juliet will die unless Romeo loves *her* : "If he be wed, the grave is like to be my wedding bed ;" but Viola is ready to die for the happiness of the man who does *not* love her ; faithfully doing his messages to her rival, whom she examines strictly for his sake. It is not in envy that she says, "Excellently done,—if God did all." The key to her character is given in the least selfish of all lover's songs, the one to which the Duke bids her listen :

“Mark it, Cesario,—it is old and plain,
The spinsters and the knitters in the sun,
And the free maids, that *weave their thread with bones*,
Do use to chaunt it.”

(They, the unconscious Fates, weaving the fair vanity of life with death) ; and the burden of it is—

“My part of Death, no one so true
Did share it.”

Therefore she says, in the great first scene, “Was not *this* love indeed?” and in the less heeded closing one, her heart then happy with the knitters in the *sun*,

“And all those sayings will I over-swear,
And all those swearings keep as true in soul
As doth that orb'd continent the Fire
That severs day from night.”

Or, at least, did once sever day from night,—and perhaps does still in Illyria. Old England must seek new images for her loves from gas and electric sparks,—not to say furnace fire.

I am obliged, by press of other work, to set down these notes in cruel shortness : and many a reader may be disposed to question utterly the standard by which the measurement is made. It will not be found, on reference to my other books, that they encourage young ladies to go into convents ; or undervalue the dignity of wives and mothers. But, as surely as the sun *does* sever day from night, it will be found always that the noblest and loveliest women are dutiful and religious by continual nature ; and their passions are trained to obey them ; like their dogs. Homer, indeed, loves Helen with all his heart, and restores her, after all her naughtiness, to the queenship of her household ; but he never thinks of her as Penelope's equal, or Iphigenia's. Practically, in daily life, one often sees married women as good as saints ; but rarely, I think, unless they have a good deal to bear from their husbands. Sometimes also, no doubt, the husbands have some trouble in managing St. Cecilia or St. Elizabeth ; of which questions I shall be obliged to speak more seriously in another

place : content, at present, if English maids know better, by Proserpina's help, what Shakspeare meant by the dim, and Milton by the glowing, violet.

CHAPTER II.

PINGUICULA.

(Written in early June, 1881.)

1. ON the rocks of my little stream, where it runs, or leaps, through the moorland, the common *Pinguicula* is now in its perfectest beauty ; and it is one of the offshoots of the violet tribe which I have to place in the minor collateral groups of *Viola* very soon, and must not put off looking at it till next year.

There are three varieties given in Sowerby : 1. *Vulgaris*, 2. Greater-flowered, and 3. *Lusitanica*, white, for the most part, pink, or 'carnea,' sometimes : but the proper colour of the family is violet, and the perfect form of the plant is the 'vulgar' one. The larger-flowered variety is feebler in colour, and ruder in form : the white Spanish one, however, is very lovely, as far as I can judge from Sowerby's (*old* Sowerby's) pretty drawing.

The 'frequent' one (I shall usually thus translate '*vulgaris*'), is not by any means so 'frequent' as the Queen violet, being a true wild-country, and mostly Alpine, plant ; and there is also a real '*Pinguicula Alpina*,' which we have not in England, who might be the *Regina*, if the group were large enough to be reigned over : but it is better not to affect Royalty among these confused, intermediate, or dependent families.

2. In all the varieties of *Pinguicula*, each blossom has one stalk only, growing from the *ground* ; and you may pull all the leaves away from the base of it, and keep the flower only, with its bunch of short fibrous roots, half an inch long ; looking as if bitten at the ends. Two flowers, characteristically, —three and four very often,—spring from the same root, in places where it grows luxuriantly ; and luxuriant growth

means that clusters of some twenty or thirty stars may be seen on the surface of a square yard of boggy ground, quite to its mind ; but its real glory is in harder life, in the crannies of well-wetted rock.

3. What I have called 'stars' are irregular clusters of approximately, or tentatively, five aloeine ground leaves, of very pale green,—they may be six or seven, or more, but always run into a rudely pentagonal arrangement, essentially first trine, with two succeeding above. Taken as a whole the *plant* is really a main link between violets and *Droseras* ; but the *flower* has much more violet than *Drosera* in the make of it,—spurred, and *five-petaled*,* and held down by the top of its bending stalk as a violet is ; only its upper two petals are not reverted—the calyx, of a dark soppy green, holding them down, with its three front sepals set exactly like a strong

* When I have the chance, and the time, to submit the proofs of 'Proserpina' to friends who know more of Botany than I, or have kindness enough to ascertain debateable things for me, I mean in future to do so,—using the letter A to signify Amicus, generally ; with acknowledgment by name, when it is permitted, of especial help or correction. Note first of this kind : I find here on this word, 'five-petaled,' as applied to *Pinguicula*, "Qy. two lipped ? it is monopetalous, and monosepalous, the calyx and corolla being each all in one piece."

Yes ; and I am glad to have the observation inserted. But my term, 'five-petaled,' must stand. For the question with me is always first, not how the petals are connected, but how many they are. Also I have accepted the term petal—but never the word lip—as applied to flowers. The generic term 'Labiatae' is cancelled in 'Proserpina.' 'Vestales' being substituted ; and these flowers, when I come to examine them, are to be described, not as divided into two lips, but into hood, apron, and side-pockets. Farther, the depth to which either calyx or corolla is divided, and the firmness with which the petals are attached to the torus, may, indeed, often be an important part of the plant's description, but ought not to be elements in its definition. Three petaled and three-sepaled, four-petaled and four-sepaled, five-petaled and five-sepaled, etc., etc., are essential—with me, primal—elements of definition ; next, whether resolute or stellar in their connection ; next, whether round or pointed, etc. Fancy, for instance, the fatality to a rose of pointing its petals, and to a lily, of rounding them ! But how deep cut, or how hard holding, is quite a minor question.

Farther, that all plants *are* petaled and sepaled, and never mere cups in saucers, is a great fact, not to be dwelt on in a note.

trident, its two backward sepals clasping the spur. There are often six sepals, four to the front, but the normal number is five. Tearing away the calyx, I find the flower to have been held by it as a lion might hold his prey by the loins if he missed its throat; the blue petals being really campanulate, and the flower best described as a dark bluebell, seized and crushed almost flat by its own calyx in a rage. Pulling away now also the upper petals, I find that what are in the violet the lateral and well-ordered fringes, are here thrown mainly on the lower (largest) petal near its origin, and opposite the point of the seizure by the calyx, spreading from this centre over the surface of the lower petals, partly like an irregular shower of fine Venetian glass broken, partly like the wild-flung Medusa-like embroidery of the white Lucia.*

4. The calyx is of a dark *soppy* green, I said; like that of sugary preserved citron; the root leaves are of green just as soppy, but pale and yellowish, as if they were half decayed; the edges curled up and, as it were, water-shrivelled, as one's fingers shrivel if kept too long in water. And the whole plant looks as if it had been a violet unjustly banished to a bog, and obliged to live there—not for its own sins, but for some Emperor Pansy's, far away in the garden,—in a partly boggy, partly hoggish manner, drenched and desolate; and with something of demoniac temper got into its calyx, so that it quarrels with, and bites the corolla;—something of gluttonous and greasy habit got into its leaves; a discomfortable sensuality, even in its desolation. Perhaps a penguin-ish life would be truer of it than a piggish, the *nest* of it being indeed on the rock, or morassy rock-investiture, like a sea-bird's on her rock ledge.

5. I have hunted through seven treatises on botany, namely Loudon's *Encyclopædia*, Balfour, Grindon, Oliver, Baxter of Oxford, Lindley ('Ladies' Botany'), and Fiquier, without being able to find the meaning of '*Lentibulariaceæ*,' to which

* Our '*Lucia Nivea*,' '*Blanche Lucy*;' in present botany, Bog bean! having no connection whatever with any manner of bean, but only a slight resemblance to bean-leaves in its own lower ones. Compare Ch. IV. § 11.

tribe the *Pinguicula* is said by them all (except Figuiet) to belong. It may perhaps be in Sowerby ; * but these above-named treatises are precisely of the kind with which the ordinary scholar must be content : and in all of them he has to learn this long, worse than useless, word, under which he is betrayed into classing together two orders naturally quite distinct, the Butterworts and the Bladderworts.

Whatever the name may mean—it is bad Latin. There is such a word as *Lenticularis*—there is no *Lentibularis* ; and it must positively trouble us no longer.†

The Butterworts are a perfectly distinct group—whether small or large, always recognizable at a glance. Their proper Latin name will be *Pinguicula*, (plural *Pinguiculæ*,)—their

* It is not. (Resolute negative from A., unsparing of time for me ; and what a state of things it all signifies !)

† With the following three notes, ‘ A ’ must become a definitely and gratefully interpreted letter. I am indebted for the first, conclusive in itself, but variously supported and confirmed by the two following, to R. J. Mann, Esq., M.D., long ago a pupil of Dr. Lindley’s, and now on the council of Whitelands College, Chelsea:—for the second, to Mr. Thomas Moore, F.L.S., the kind Keeper of the Botanic Garden at Chelsea ; for the third, which will be farther on useful to us, to Miss Kemm, the botanical lecturer at Whitelands.

(1) There is no explanation of *Lentibulariaceæ* in Lindley’s ‘ Vegetable Kingdom.’ He was not great in that line. The term is, however, taken from *Lenticula*, the lentil, in allusion to the lentil-shaped air-bladders of the typical genus *Utricularia*.

The change of the c into b may possibly have been made only from some euphonic fancy of the contriver of the name, who, I think, was Rich.

But I somewhat incline myself to think that the *tibia*, a pipe or flute, may have had something to do with it. The *tibia* may possibly have been diminished into a little pipe by a stretch of licence, and have become *tibula* : [but *tibulus* is a kind of pine tree in Pliny] ; when *Lentibula* would be the lens or lentil-shaped pipe or bladder. I give you this only for what it is worth. The *lenticula*, as a derivation, is reliable and has authority.

Lenticula, a lentil, a freckly eruption ; *lenticularis*, lentil-shaped ; so the nat. ord. ought to be (if this be right) *lenticulariaceæ*.

(2) BOTANIC GARDENS, CHELSEA, Feb. 14, 1882.

Lentibularia is an old generic name of Tournefort’s, which has been superseded by *utricularia*, but, oddly enough, has been retained in the

English, Bog-Violet, or, more familiarly; Butterwort; and their French, as at present, *Grassette*.

The families to be remembered will be only five, namely,

1. *Pinguicula Major*, the largest of the group. As bog plants, Ireland may rightly claim the noblest of them, which certainly grow there luxuriantly, and not (I believe) with us. Their colour is, however, more broken and less characteristic than that of the following species.

2. *Pinguicula Violacea*: Violet-coloured Butterwort, (instead of 'vulgaris,') the common English and Swiss kind above noticed.

3. *Pinguicula Alpina*: Alpine Butterwort, white and much smaller than either of the first two families; the spur especially small, according to D. 453. Much rarer, as well as smaller, than the other varieties in Southern Europe. "In Britain, known only upon the moors of Roschaugh, Rosshire, where the progress of cultivation seems likely soon to efface it. (Grindon.)"

4. *Pinguicula Pallida*: Pale Butterwort. From Sowerby's drawing, (135, vol. iii,) it would appear to be the most delicate and lovely of all the group. The leaves, "like those of other species, but rather more delicate and pellucid, reticulated with red veins, and much involute in the margin. Tube of the corolla, yellow, streaked with red, (the streaks like those of a pansy); the petals, pale violet. It much resem-

name of the order *lentibularæ*; but it probably comes from *lenticula*, which signifies the little root bladders, somewhat resembling lentils.

(3) 'Manual of Scientific Terms,' Stormonth, p. 234.

Lentibulariaceæ, neuter, plural.

(*Lenticula*, the shape of a lentil; from *lens*, a lentil.) The Butterwort family, an order of plants so named from the lenticular shape of the air-bladders on the branches of *utricularia*, one of the genera. (But observe that the *Butterworts* have nothing of the sort, any of them.—R.)

Loudon.—"Floaters."

Lindley.—"Sometimes with whorled vesicles."

In Nuttall's Standard (?) Pronouncing Dictionary, it is given,—

Lenticularææ, a nat. ord. of marsh plants, which thrive in water or marshes.

bles *Villosa*, (our *Minima*, No. 5,) in many particulars, the stem being hairy, and in the lower part the hairs tipped with a viscid fluid, like a sundew. But the *Villosa* has a slender sharp spur; and in this the spur is blunt and thick at the end." (Since the hairy stem is not peculiar to *Villosa*, I take for her, instead, the epithet *Minima*, which is really definitive.)

The pale one is commonly called '*Lusitanica*,' but I find no direct notice of its Portuguese habitation. Sowerby's plant came from Blandford, Dorsetshire; and Grindon says it is frequent in Ireland, abundant in Arran, and extends on the western side of the British island from Cornwall to Cape Wrath. My epithet, *Pallida*, is secure, and simple, wherever the plant is found.

5. *Pinguicula Minima*: Least Butterwort; in D. 1021 called *Villosa*, the *scape* of it being hairy. I have not yet got rid of this absurd word '*scape*,' meaning, in botanist's Latin, the flower-stalk of a flower growing out of a cluster of leaves on the ground. It is a bad corruption of '*sceptre*,' and especially false and absurd, because a true sceptre is necessarily branched.* In '*Proserpina*,' when it is spoken of distinctively; it is called '*virgula*' (see vol. i., pp. 112, 115, 116). The hairs on the *virgula* are in this instance so minute, that even with a lens I cannot see them in the Danish plate: of which Fig. 3 is a rough translation into wood-cut, to show the grace and mien of the little thing. The trine leaf cluster is characteristic, and the folding up of the leaf edges. The flower, in the Danish plate, full purple. Abundant in east of *Finmark* (Finland?), but *always growing in marsh moss*, (*Sphagnum palustre*.)

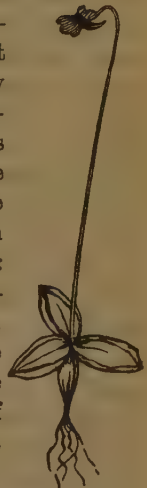


FIG. 3.

6. I call it '*Minima*' only, as the least of the five here named: without putting forward any claim for it to be the smallest *pinguicula* that ever was or will be. In such sense

* More accurately, shows the pruned roots of branches,—ἐπειδὴ πρῶτα ὁμὴν ἐν ὄρεσσι λέλοιπεν. The *pruning* is the mythic expression of the subduing of passion by rectorial law.

only, the epithets *minima* or *maxima* are to be understood when used in 'Proserpina': and so also, every statement and every principle is only to be understood as true or tenable, respecting the plants which the writer has seen, and which he is sure that the reader can easily see: liable to modification to any extent by wider experience; but better first learned securely within a narrow fence, and afterwards trained or fructified, along more complex trellises.

7. And indeed my readers—at least, my newly found readers—must note always that the only power which I claim for any of my books, is that of being right and true as far as they reach. None of them pretend to be *Kosmoses*;—none to be systems of Positivism or Negativism, on which the earth is in future to swing instead of on its old worn-out poles;—none of them to be works of genius;—none of them to be, more than all true work *must* be, pious;—and none to be, beyond the power of common people's eyes,* ears, and noses, 'æsthetic.' They tell you that the world is so big, and can't be made bigger—that you yourself are also so big, and can't be made bigger, however you puff or bloat yourself; but that, on modern mental nourishment, you may very easily be made smaller. They tell you that two and two are four, that ginger is hot in the mouth, that roses are red, and smuts black. Not themselves assuming to be pious, they yet assure you that there is such a thing as piety in the world, and that it is wiser than impiety; and not themselves pretending to be works of genius, they yet assure you that there is such a thing as genius in the world, and that it is meant for the light and delight of the world.

8. Into these repetitions of remarks on my work, often made before, I have been led by an unlucky author who has just sent me his book, advising me that it is "neither critical nor sentimental" (he had better have said in plain English "without either judgment or feeling"), and in which nearly

* The bitter sorrow with which I first recognized the extreme rarity of finely-developed organic sight is expressed enough in the lecture on the Mystery of Life, added in the large edition of 'Sesame and Lilies.'

the first sentence I read is—"Solomon with all his acuteness was not wise enough to . . . etc., etc., etc." ('give the Jews the British constitution,' I believe the man means.) He is not a whit more conceited than Mr. Herbert Spencer, or Mr. Goldwin Smith, or Professor Tyndall,—or any lively London apprentice out on a Sunday ; but this general superciliousness with respect to Solomon, his Proverbs, and his politics, characteristic of the modern Cockney, Yankee, and Anglicised Scot, is a difficult thing to deal with for us of the old school, who were well whipped when we were young ; and have been in the habit of occasionally ascertaining our own levels as we grew older, and of recognizing that, here and there, somebody stood higher, and struck harder.

9. A difficult thing to deal with, I feel more and more, hourly, even to the point of almost ceasing to write ; not only every feeling I have, but, of late, even *every word I use*, being alike inconceivable to the insolence, and unintelligible amidst the slang, of the modern London writers. Only in the last magazine I took up, I found an article by Mr. Goldwin Smith on the Jews (of which the gist—as far as it had any—was that we had better give up reading the Bible), and in the text of which I found the word 'tribal' repeated about ten times in every page. Now, if 'tribe' makes tribal, tube must make tubal, cube, cubal, and gibe, gibal ; and I suppose we shall next hear of tubal music, cubal minerals, and gibal conversation ! And observe how all this bad English leads instantly to blunder in thought, prolonged indefinitely. The Jewish Tribes are not separate races, but the descendants of brothers. The Roman Tribes, political divisions ; essentially Trine : and the whole force of the word Tribune vanishes, as soon as the ear is wrung into acceptance of his lazy innovation by the modern writer. Similarly, in the last elements of mineralogy I took up, the first order of crystals was called 'tesseral' ; the writer being much too fine to call them 'four-al,' and too much bent on distinguishing himself from all previous writers to call them cubic.

10. What simple schoolchildren, and sensible schoolmasters, are to do in this atmosphere of Egyptian marsh,

which rains fools upon them like frogs, I can no more with any hope or patience conceive ;—but this finally I repeat, concerning my own books, that they are written in honest English, of good Johnsonian lineage, touched here and there with colour of a little finer or Elizabethan quality : and that the things they tell you are comprehensible by any moderately industrious and intelligent person ; and *accurate*, to a degree which the accepted methods of modern science cannot, in my own particular fields, approach.

11. Of which accuracy, the reader may observe for immediate instance, my extrication for him, from among the *uvularias*, of these five species of the Butterwort ; which, being all that need be distinctly named and remembered, *do* need to be first carefully distinguished, and then remembered in their companionship. So alike are they, that Gerarde makes no distinction among them ; but masses them under the general type of the frequent English one, described as the second kind of his promiscuous group of ‘*Sanicle*,’ “which Clusius calleth *Pinguicula* ; not before his time remembered, hath sundry small thick leaves, fat and full of juice, being broad towards the root and sharp towards the point, of a faint green colour, and bitter in taste ; out of the midst whereof sprouteth or shooteth up a naked slender stalke nine inches long, every stalke bearing one flower and no more, sometimes white, and sometimes of a bluish purple colour, fashioned like unto the common Monkshoods” (he means Larkspurs) “called *Consolida Regalis*, having the like spur or Lark’s heel attached thereto.” Then after describing a third kind of *Sanicle*—(*Cortusa Mathioli*, a large-leaved Alpine *Primula*,) he goes on : “These plants are strangers in England ; their natural country is the alpeish mountains of Helvetia. They grow in my garden, where they flourish exceedingly, except Butterwort, which groweth in our English *squally* wet grounds,”—(‘*Squally*,’ I believe, here, from *squalidus*, though Johnson does not give this sense ; but one of his quotations from Ben Jonson touches it nearly : “Take heed that their new flowers and sweetness do not as much corrupt as the others’ dryness and squalor,”—and note farther that the word ‘*squall*,’ in the

sense of gust, is not pure English, but the Arabic 'Chual' with an s prefixed:—the English word, a form of 'squeal,' meaning a child's cry, from Gothic 'Squæla' and Icelandic 'squilla,' would scarcely have been made an adjective by Gerarde),—"and will not yield to any culturing or transplanting: it groweth especially in a field called Cragge Close, and at Crosbie Ravenswath, in Westmerland; (West-mere-land you observe, not *mor*) upon Ingleborough Fells, twelve miles from Lancaster, and by Harwoode in the same county near to Blackburn: ten miles from Preston, in Anderness, upon the bogs and marish ground, and in the boggie meadows about Bishop's-Hatfield, and also in the fens in the way to Wittles Meare" (Roger Wildrake's Squattlesea Mere?) "from Fendon, in Huntingdonshire." Where doubtless Cromwell ploughed it up, in his young days, pitilessly; and in nowise pausing, as Burns beside his fallen daisy."

12. Finally, however, I believe, we may accept its English name of 'Butterwort' as true Yorkshire, the more enigmatic form of 'Pigwilly' preserving the tradition of the flowers once abounding, with softened Latin name, in Pigwilly bottom, close to Force bridge, by Kendal. Gerarde draws the English variety as "*Pinguicula sive Sanicula Eboracensis*,—Butterwort, or Yorkshire Sanicle;" and he adds: "The husbandmen's wives of Yorkshire do use to anoint the dugs of their kine with the fat and oilous juice of the herb Butterwort when they be bitten of any venomous worm, or chapped, rifted and hurt by any other means."

13. In Lapland it is put to much more certain use; "it is called Tâtgrass, and the leaves are used by the inhabitants to make their 'tât miolk,' a preparation of milk in common use among them. Some fresh leaves are laid upon a filter, and milk, yet warm from the reindeer, is poured over them. After passing quickly through the filter, this is allowed to rest for one or two days until it becomes ascendent,* when it is found not to have separated from the whey, and yet to have attained much greater tenacity and consistence than it would have done otherwise. The Laplanders and Swedes are said to be ex-

* Lat. *acesco*, to turn sour.

tremely fond of this milk, which when once made, it is not necessary to renew the use of the leaves, for we are told that a spoonful of it will turn another quantity of warm milk, and make it like the first." * (Baxter, vol. iii., No. 209.)

14. In the same page, I find quoted Dr. Johnston's observation that "when specimens of this plant were somewhat rudely pulled up, the flower-stalk, previously erect, almost immediately began to bend itself backwards, and formed a more or less perfect segment of a circle; and so also, if a specimen is placed in the Botanic box, you will in a short time find that the leaves have curled themselves backwards, and now conceal the root by their revolution."

I have no doubt that this elastic and wiry action is partly connected with the plant's more or less predatory or fly-trap character, in which these curiously degraded plants are associated with *Drosera*. I separate them therefore entirely from the Bladderworts, and hold them to be a link between the Violets and the *Droseraceæ*, placing them, however, with the *Cytherides*, as a sub-family, for their beautiful colour, and because they are indeed a grace and delight in ground which, but for them, would be painfully and rudely desolate.

* Withering quotes this as from Linnæus, and adds on authority of a Mr. Hawkes, "This did not succeed when tried with cows' milk." He also gives as another name, Yorkshire Sanicle; and says it is called *earning grass* in Scotland. Linnæus says the juice will curdle reindeer's milk. The name for rennet is *earning*, in Lincolnshire. Withering also gives this note: "*Pinguis*, fat, from its effect in CONGEALING milk."—(A.) Withering of course wrong: the name comes, be the reader finally assured, from the fatness of the green leaf, quite peculiar among wild plants, and fastened down for us in the French word 'Grassette.' I have found the flowers also difficult to dry, in the benighted early times when I used to think a dried plant useful! See closing paragraphs of the 4th chapter.—R.

CHAPTER III.

VERONICA.

1. "THE Corolla of the Foxglove," says Dr. Lindley, beginning his account of the tribe at page 195 of the first volume of his 'Ladies' Botany,' "is a large inflated body (!), with its throat spotted with rich purple, and its border divided obliquely into five very short lobes, of which the two upper are the smaller ; its four stamens are of unequal length, and its style is divided into two lobes at the upper end. A number of long hairs cover the ovary, which contains two cells and a great quantity of ovules.

"This" (sc. information) "will show you what is the usual character of the Foxglove tribe ; and you will find that all the other genera referred to it in books agree with it essentially, although they differ in subordinate points. It is chiefly (A) in the form of the corolla, (B) in the number of the stamens, (C) in the consistence of the rind of the fruit, (D) in its form, (E) in the number of the seeds it contains, and (F) in the manner in which the sepals are combined, that these differences consist."

2. The enumerative letters are of my insertion—otherwise the above sentence is, word for word, Dr. Lindley's,—and it seems to me an interesting and memorable one in the history of modern Botanical science. For it appears from the tenor of it, that in a scientific botanist's mind, six particulars, at least, in the character of a plant, are merely 'subordinate points,'—namely,

1. (F) The combination of its calyx,
2. (A) The shape of its corolla,
3. (B) The number of its stamens,
4. (D) The form of its fruit,
5. (C) The consistence of its shell,—and
6. (E) The number of seeds in it.

Abstracting, then, from the primary description, all the six inessential points, I find the three essential ones left are, that

the style is divided into two lobes at the upper end, that a number of glandular hairs cover the ovary, and that this latter contains two cells.

3. None of which particulars concern any reasonable mortal, looking at a Foxglove, in the smallest degree. Whether hairs which he can't see are glandular or bristly,—whether the green knobs, which are left when the purple bells are gone, are divided into two lobes or two hundred,—and whether the style is split, like a snake's tongue, into two lobes, or like a rogue's, into any number—are merely matters of vulgar curiosity, which he needs a microscope to discover, and will lose a day of his life in discovering. But if any pretty young Proserpina, escaped from the Plutonic durance of London, and carried by the tubular process, which replaces Charon's boat, over the Lune at Lancaster, cares to come and walk on the Coniston hills in a summer morning, when the eyebright is out on the high fields, she may gather, with a little help from Brantwood garden, a bouquet of the entire Foxglove tribe in flower, as it is at present defined, and may see what they are like, altogether.

4. She shall gather : first, the Euphrasy, which makes the turf on the brow of the hill glitter as if with new-fallen manna ; then, from one of the blue clusters on the top of the garden wall, the common bright blue Speedwell ; and, from the garden bed beneath, a dark blue spire of *Veronica spicata* ; then, at the nearest opening into the wood, a little foxglove in its first delight of shaking out its bells ; then—what next does the Doctor say ?—a snapdragon ? we must go back into the garden for that—here is a goodly crimson one, but what the little speedwell will think of him for a relative *I* can't think !—a mullein ?—that we must do without for the moment ; a monkey flower ?—that we will do without, altogether ; a lady's slipper ?—say rather a goblin's with the gout ! but, such as the flower-cobbler has made it, here is one of the kind that people praise, out of the greenhouse,—and yet a figwort we must have, too ; which I see on referring to Loudon, may be balm-leaved, hemp-leaved, tansy-leaved, nettle-leaved, wing-leaved, heart-leaved, ear-leaved, spear-leaved, or lyre-leaved.

I think I can find a balm-leaved one, though I don't know what to make of it when I've got it, but it's called a 'Scorodonia' in Sowerby, and something very ugly besides ;—I'll put a bit of *Teucrium Scorodonia* in, to finish : and now—how will my young Proserpina arrange her bouquet, and rank the family relations to their contentment ?

5. She has only one kind of flowers in her hand, as botanical classification stands at present ; and whether the system be more rational, or in any human sense more scientific, which puts *calceolaria* and *speedwell* together,—and *foxglove* and *euphrasy* ; and runs them on one side into the mints, and on the other into the nightshades ;—naming them, meanwhile, some from diseases, some from vermin, some from blockheads, and the rest anyhow :—or the method I am pleading for, which teaches us, watchful of their seasonable return and chosen abiding places, to associate in our memory the flowers which truly resemble, or fondly companion, or, in time kept by the signs of Heaven, succeed, each other ; and to name them in some historical connection with the loveliest fancies and most helpful faiths of the ancestral world—*Proserpina* be judge ; with every maid that sets flowers on brow or breast—from *Thule* to *Sicily*.

6. We will unbind our bouquet, then, and putting all the rest of its flowers aside, examine the range and nature of the little blue cluster only.

And first—we have to note of it, that the plan of the blossom in all the kinds is the same ; an irregular *quatrefoil* : and irregular *quatrefoils* are of extreme rarity in flower form. I don't myself know *one*, except the *Veronica*. The cruciform vegetables—the heaths, the olives, the lilacs, the little *Tormentillas*, and the poppies, are all perfectly symmetrical. Two of the petals, indeed, as a rule, are different from the other two, except in the heaths ; and thus a distinctly crosslet form obtained, but always an equally balanced one : while in the *Veronica*, as in the *Violet*, the blossom always refers itself to a supposed place on the stalk with respect to the ground ; and the upper petal is always the largest.

The supposed place is often very suppositious indeed—for

clusters of the common veronicas, if luxuriant, throw their blossoms about anywhere. But the idea of an upper and lower petal is always kept in the flower's little mind.

7. In the second place, it is a quite open and flat quatrefoil—so separating itself from the belled quadrature of the heath, and the tubed and primrose-like quadrature of the cruciferæ; and, both as a quatrefoil, and as an open one, it is separated from the foxgloves and snapdragons, which are neither quatrefoils, nor open; but are cinqfoils shut up!

8. In the third place, open and flat though the flower be, it is monopetalous; all the four arms of the cross strictly becoming one in the centre; so that, though the blue foils *look* no less sharply separate than those of a buttercup or a cistus; and are so delicate that one expects them to fall from their stalk if we breathe too near,—do but lay hold of one,—and, at the touch, the entire blossom is lifted from its stalk, and may be laid, in perfect shape, on our paper before us, as easily as if it had been a nicely made-up blue bonnet, lifted off its stand by the milliner.

I pause here, to consider a little; because I find myself mixing up two characteristics which have nothing necessary in their relation;—namely, the unity of the blossom, and its coming easily off the stalk. The separate petals of the cistus and cherry fall as easily as the foxglove drops its bells;—on the other hand, there are monopetalous things that don't drop, but hold on like the convoluta,* and make the rest of the tree sad for their dying. I do not see my way to any systematic noting of decadent or persistent corolla; but, in passing, we may thank the veronica for never allowing us to see how it fades,† and being always cheerful and lovely, while it is with us.

* I find much more difficulty, myself, being old, in using my altered names for species than my young scholars will. In watching the bells of the purple bindweed fade at evening, let them learn the fourth verse of the prayer of Hezekiah, as it is in the Vulgate—"Generatio mea ablata est, et convoluta est a me, sicut tabernaculum pastoris,"—and they will not forget the name of the fast-fading—ever renewed—"belle d'un jour."

† "It is Miss Cobbe, I think, who says, 'all wild flowers know how to die gracefully.'"—A.

9. And for a farther specialty, I think we should take note of the purity and simplicity of its *floral* blue, not sprinkling itself with unwholesome sugar like a larkspur, nor varying into coppery or turquoise-like hue as the forget-me-not ; but keeping itself as modest as a blue print, pale, in the most frequent kinds ; but pure exceedingly ; and rejoicing in fellowship with the grey of its native rocks. The palest of all I think it will be well to remember as *Veronica Clara*, the "Poor Clare" of Veronicas. I find this note on it in my diary,—

'The flower of an exquisite grey-white, like lichen, or shaded hoar-frost, or dead silver ; making the long-weathered stones it grew upon perfect with a finished modesty of paleness, as if the flower *could* be blue, and would not, for their sake. Laying its fine small leaves along in embroidery, like *Anagallis tenella*,—indescribable in the tender feebleness of it—afterwards as it grew, dropping the little blossoms from the base of the spire, before the buds at the top had blown. Gathered, it was happy beside me, with a little water under a stone, and put out one pale blossom after another, day by day.'

10. Lastly, and for a high worthiness, in my estimate, note that it is *wild*, of the wildest, and proud in pure descent of race ; submitting itself to no follies of the cur-breeding florist. Its species, though many resembling each other, are severally constant in aspect, and easily recognizable ; and I have never seen it provoked to glare into any gigantic impudence at a flower show. Fortunately, perhaps, it is scentless, and so despised.

11. Before I attempt arranging its families, we must note that while the corolla itself is one of the most constant in form, and so distinct from all other blossoms that it may be always known at a glance ; the leaves and habit of growth vary so greatly in families of different climates, and those born for special situations, moist or dry, and the like, that it is quite impossible to characterize *Veronic*, or *Veronique*, vegetation in general terms. One can say, comfortably, of a strawberry, that it is a creeper, without expecting at the next moment to

see a steeple of strawberry blossoms rise to contradict us ;— we can venture to say of a foxglove that it grows in a spire, without any danger of finding, farther on, a carpet of prostrate and entangling digitalis ; and we may pronounce of a buttercup that it grows mostly in meadows without fear of finding ourselves at the edge of the next thicket, under the shadow of a buttercup-bush growing into valuable timber. But the Veronica reclines with the lowly,* upon occasion, and aspires, with the proud ; is here the pleased companion of the ground-ivies, and there the unrebuked rival of the larkspurs : on the rocks of Coniston it effaces itself almost into the film of a lichen ; it pierces the snows of Iceland with the gentian : and in the Falkland Islands is a white-blossomed evergreen, of which botanists are in dispute whether it be Veronica or Olive.

12. Of these many and various forms, I find the manners and customs alike inconstant ; and this of especially singular in them—that the Alpine and northern species bloom hardily in contest with the retiring snows, while with us they wait till the spring is past, and offer themselves to us only in consolation for the vanished violet and primrose. As we farther examine the ways of plants, I suppose we shall find some that determine upon a fixed season, and will bloom methodically in June or July, whether in Abyssinia or Greenland ; and others, like the violet and crocus, which are flowers of the spring, at whatever time of the favouring or frowning year the spring returns to their country. I suppose also that botanists and gardeners know all these matters thoroughly : but they don't put them into their books, and the clear notions of them only come to me now, as I think and watch.

13. Broadly, however, the families of the Veronica fall into three main divisions,—those which have round leaves lobed at the edge, like ground ivy ; those which have small thyme-like leaves ; and those which have long leaves like a foxglove's, only smaller—never more than two or two and a half inches long. I therefore take them in these connections, though without any bar between the groups ; only separating the Re-

* See distinction between recumbent and rampant herbs, below, under 'Veronica Agrestis,' p. 212.

gina from the other thyme-leaved ones, to give her due precedence; and the rest will then arrange themselves into twenty families, easily distinguishable and memorable.

I have chosen for *Veronica Regina*, the brave Icelandic one, which pierces the snow in first spring, with lovely small shoots of perfectly set leaves, no larger than a grain of wheat; the

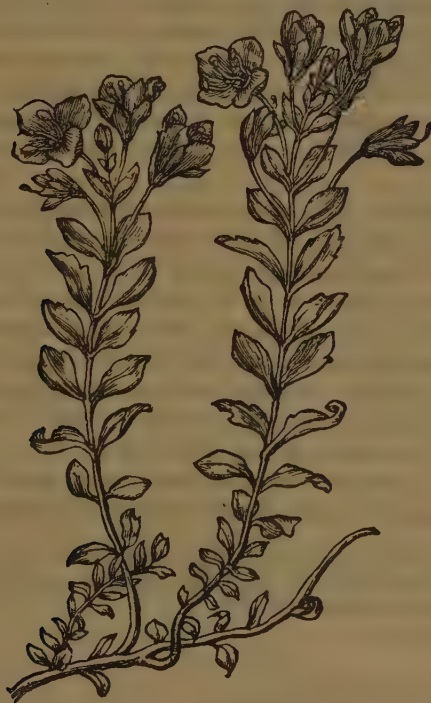


FIG. 4.

flowers in a lifted cluster of five or six together, not crowded, yet not loose; large, for veronica—about the size of a silver penny, or say half an inch across—deep blue, with ruby centre.

My woodcut, Fig. 4, is outlined* from the beautiful en-

* 'Abstracted' rather, I should have said, and with perfect skill, by Mr. Collingwood (the joint translator of Xenophon's *Economics* for the 'Bibliotheca Pastorum'). So also the next following cut, Fig. 5.

graving D. 342,*—there called ‘*fruticulosa*,’ from the number of the young shoots.

14. Beneath the Regina, come the twenty easily distinguished families, namely :—

1. *Chamædrys*. ‘Ground-oak.’ I cannot tell why so called—its small and rounded leaves having nothing like oak leaves about them, except the serration, which is common to half, at least, of all leaves that grow. But the idea is all over Europe, apparently. Fr. ‘*petit chêne* :’ German and English ‘Germander,’ a merely corrupt form of *Chamædrys*.

The representative English veronica “Germander Speedwell”—very prettily drawn in S. 986 ; too tall and weedlike in D. 448.

2. *Hederifolia*. Ivy-leaved : but more properly, *cymbalaria*-leaved. It is the English field representative, though blue-flowered, of the Byzantine white veronica, *V. Cymbalaria*, very beautifully drawn in G. 9. *Hederifolia* well in D. 428.

3. *Agrestis*. Fr. ‘*Rustique*.’ We ought however clearly to understand whether ‘*agrestis*,’ used by English botanists, is meant to imply a literally field flower, or only a ‘rustic’ one, which might as properly grow in a wood. I shall always myself use ‘*agrestis*’ in the literal sense, and ‘*rustica*’ for ‘*rustique*.’ I see no reason, in the present case, for separating the Polite from the Rustic flower : the *agrestis*, D. 449

* Of the references, henceforward necessary to the books I have used as authorities, the reader will please note the following abbreviations :—

C. Curtis’s Magazine of Botany.

D. Flora Danica.

F. Figuier.

G. Sibthorpe’s Flora Græca.

L. Linnæus. Systema Naturæ.

L. S. Linnæus’s Flora Suecica. But till we are quite used to the other letters, I print this reference in words.

L. N. William Curtis’s Flora Londinensis. Of the exquisite plates engraved for this book by James Sowerby, note is taken in the close of next chapter.

O. Sowerby’s English Wild Flowers ; the old edition in thirty-two thin volumes—far the best.

S. Sowerby’s English Wild Flowers ; the modern edition in ten volumes.

and S. 971, seems to me not more meekly recumbent, nor more frankly cultureless, than the so-called Polita, S. 972: there seems also no French acknowledgment of its politeness, and the Greek family, G. 8, seem the rudest and wildest of all.

Quite a *field* flower it is, I believe, lying always low on the ground, recumbent, but not creeping. Note this difference: no fastening roots are thrown out by the reposing stems of this Veronica; a creeping or accurately 'rampant' plant roots itself in advancing. Conf. Nos. 5, 6.

4. *Arvensis*. We have yet to note a still finer distinction in epithet. 'Agrestis' will properly mean a flower of the open ground—yet not caring whether the piece of earth be cultivated or not, so long as it is under clear sky. But when *agriculture* has turned the unfruitful acres into 'arva beata,'—if then the plant thrust itself between the furrows of the plough, it is properly called 'Arvensis.'

I don't quite see my way to the same distinction in English,—perhaps I may get into the habit, as time goes on, of calling the Arvenses consistently furrow-flowers, and the Agrestes field-flowers. Furrow-veronica is a tiresomely long name, but must do for the present, as the best interpretation of its Latin character, "vulgatissima in cultis et arvis," D. 515. The blossom itself is exquisitely delicate; and we may be thankful, both here and in Denmark, for such a lovely 'vulgate.'

5. *Montana*. D. 1201. The first really creeping plant we have had to notice. It throws out roots from the recumbent stems. Otherwise like *agrestis*, it has leaves like ground-ivy. Called a wood species in the text of D.

6. *Persica*. An eastern form, but now perfectly naturalized here—D. 1982; S. 973. The flowers very large, and extremely beautiful, but only one springing from each leaf-axil.

Leaves and stem like *Montana*; and also creeping with new roots at intervals.

7. *Triphylla* (not *triphyllus*,—see *Flora Suecica*, 22). Meaning trifid-leaved; but the leaf is really divided into five lobes, not three—see S. 974, and G. 10. The palmate form of the leaf seems a mere caprice, and indicates no transi-

tional form in the plant: it may be accepted as only a momentary compliment of mimicry to the geraniums. The Siberian variety, 'multifida,' C. 1679, divides itself almost as the submerged leaves of the water-ranunculus.

The triphylla itself is widely diffused, growing alike on the sandy fields of Kent, and of Troy. In D. 627 is given an extremely delicate and minute northern type, the flowers springing as in Persica, one from each leaf-axil, and at distant intervals.

8. Officinalis. D. 248, S. 294. Fr. 'Veronique officinale'; (Germ. Gebrauchlicher Ehrenpreis,) our commonest English and Welsh speedwell; richest in cluster and frankest in roadside growth, whether on bank or rock; but assuredly liking *either* a bank or a rock, and the top of a wall better than the shelter of one. Uncountable 'myriads,' I am tempted to write, but, cautiously and literally, 'hundred' of blossoms—if one *could* count,—ranging certainly towards the thousand in some groups, all bright at once, make our Westmoreland lanes look as if they were decked for weddings, in early summer. In the Danish Flora it is drawn small and poor; its southern type being the true one: but it is difficult to explain the difference between the look of a flower which really *suffers*, as in this instance, by a colder climate, and becomes mean and weak, as well as dwarfed; and one which is braced and brightened by the cold, though diminished, as if under the charge and charm of an affectionate fairy, and becomes a joyfully patriotic inheritor of wilder scenes and skies. Medicinal, to soul and body alike, this gracious and domestic flower; though astringent and bitter in the juice. It is the Welsh deeply honoured 'Fluellen.'—See final note on the myth of Veronica, see § 18.

9. Thymifolia. Thyme-leaved, G. 6. Of course the longest possible word—serpyllifolia—is used in S. 978. It is a high mountain plant, growing on the top of Crete as the snow retires; and the Veronica minor of Gerarde; "the roote is small and threddie, taking hold of the *upper surface* of the earth, where it spreadeth." So also it is drawn as a creeper in F. 492, where the flower appears to be oppressed and concealed by the leafage.

10. *Minuta*, called 'hirsuta' in S. 985: an ugly characteristic to name the lovely little thing by. The distinct blue lines in the petals might perhaps justify 'picta' or 'lineata,' rather than an epithet of size; but I suppose it is Gerarde's *Minima*, and so leave it, more safely named as 'minute' than 'least.' For I think the next variety may dispute the leastness.

11. *Verna*. D. 252. Mountains, in dry places in early spring. Upright, and confused in the leafage, which is sharp-pointed and close set, much hiding the blossom, but of extreme elegance, fit for a sacred foreground; as any gentle student will feel, who copies this outline from the *Flora Danica*, Fig. 5.

12. *Peregrina*. Another extremely small variety, nearly pink in colour, passing into bluish lilac and white. American; but called, I do not see why, '*Veronique voyageuse*,' by the French and Fremder Ehrenpreis in Germany. Given as a frequent English weed in S. 927.

13. *Alpina*. *Veronique des Alpes*. Gebirgs Ehrenpreis. Still minute; its scarcely distinct flowers forming a close head among the leaves; round-petalled in D. 16, but sharp, as usual, in S. 980. On the Norway Alps in grassy places; and in Scotland by the side of mountain rills; but rare. On Ben Nevis and Lachin y Gair (S.)

14. *Scutellata*. From the shield-like shape of its seed-vessels. *Veronique à Ecusson*; *Schildfruchtiger Ehrenpreis*. But the seed-vessels are more heart shape than shield. March Speedwell. S. 988, D. 209,—in the one pink, in the other blue; but again in D. 1561, pink.



FIG. 5.

"In flooded meadows, common." (D.) A spoiled and scattered form; the seeds too conspicuous, but the flowers very delicate, hence '*Gratiola minima*' in Gesner. The confused ramification of the clusters worth noting, in relation to the equally straggling fibres of root.

15. *Spicata*. S. 982: very prettily done, representing the inside of the flower as deep blue, the outside pale. The top of the spire, all calices, the calyx being indeed, through all the veronicas, an important and persistent member.

The tendency to arrange itself in spikes is to be noted as a degradation of the veronic character; connecting it on one side with the snapdragons, on the other with the ophryds. In *Veronica Ophrydea*, (C. 2210,) this resemblance to the contorted tribe is carried so far that "the corolla of the veronica becomes irregular, the tube gibbous, the faux (throat) hairy, and three of the laciniae (lobes of petals) variously twisted." The spire of blossom, violet-coloured, is then close set, and exactly resembles an ophryd, except in being sharper at the top. The engraved outline of the blossom is good, and very curious.

16. *Gentianoides*. This is the most directly and curiously imitative among the—shall we call them—'histrionic' types of *Veronica*. It grows exactly like a clustered upright gentian; has the same kind of leaves at its root, and springs with the same bright vitality among the retiring snows of the Bithynian Olympus. (G. 5.) If, however, the Caucasian flower, C. 1002, be the same, it has lost its perfect grace in luxuriance, growing as large as an asphodel, and with root-leaves half a foot long.

The petals are much veined; and this, of all veronicas, has the lower petal smallest in proportion to the three above—"triplo aut quadruplo minori." (G.)

17. *Stagnarum*. Marsh-*Veronica*. The last four families we have been examining vary from the typical *Veronicas* not only in their lance-shaped clusters, but in their lengthened, and often every way much enlarged leaves also: and the two which we now will take in association, 17 and 18, carry the change in aspect farthest of any, being both of them true

water-plants, with strong stems and thick leaves. The present name of my *Veronica Stagnarum* is however *V. anagallis*, a mere insult to the little water primula, which one plant of the *Veronica* would make fifty of. This is a rank water-weed, having confused bunches of blossom and seed, like unripe currents, dangling from the leaf-axils. So that where the little triphylla, (No. 7, above,) has only one blossom, daintily set, and well seen, this has a litter of twenty-five or thirty on a long stalk, of which only three or four are well out as flowers, and the rest are mere knobs of bud or seed. The stalk is thick (half an inch round at the bottom), the leaves long and misshapen. "*Frequens in fossis*," D. 203. French, Mouron d'Eau, but I don't know the root or exact meaning of Mouron.

An ugly Australian species, '*labiata*,' C. 1660, has leaves two inches long, of the shape of an aloe's, and partly aloecine in texture, "sawed with unequal, fleshy, pointed teeth."

18. *Fontium*. Brook-*Veronica*. Brook-*Lime*, the Anglo-Saxon '*lime*' from Latin *limus*, meaning the soft mud of streams. German '*Bach-bunge*' (Brook-purse?) ridiculously changed by the botanists into '*Beccabunga*,' for a Latin name! Very beautiful in its crowded green leaves as a stream-companion; rich and bright more than watercress. See notice of it at Matlock, in '*Modern Painters*,' vol. v.

19. *Clara*. *Veronique des rochers*. *Saxatilis*, I suppose, in Sowerby, but am not sure of having identified that with my own favourite, for which I therefore keep the name '*Clara*,' (see above § 9); and the other rock variety, if indeed another, must be remembered, together with it.

20. *Glauca*. G. 7. And this at all events, with the *Clara*, is to be remembered as closing the series of twenty families, acknowledged by *Proserpina*. It is a beautiful low-growing ivy-leaved type, with flowers of subdued lilac blue. On Mount Hymettus: no other locality given in the *Flora Græca*.

15. I am sorry, and shall always be so, when the varieties of any flower which I have to commend to the student's memory, exceed ten or twelve in number; but I am content to gratify his pride with lengthier task, if indeed he will resign

himself to the imperative close of the more inclusive catalogue, and be content to know the twelve, or sixteen, or twenty, acknowledged families, thoroughly ; and only in their illustration to think of rarer forms. The object of 'Proserpina,' is to make him happily cognizant of the common aspect of Greek and English flowers ; under the term 'English,' comprehending the Saxon, Celtic, Norman, and Danish Floras. Of the evergreen shrub alluded to in § 11 above, the *Veronica Decussata* of the Pacific, which is "a bushy evergreen, with beautifully set cross-leaves, and white blossoms scented like *olea fragrans*," I should like him only to read with much surprise, and some incredulity, in Pinkerton's or other entertaining travellers' voyages.

16. And of the families given, he is to note for the common simple characteristic, that they are quatrefoils referred to a more or less elevated position on a central stem, and having, in that relation, the lowermost petal diminished, contrary to the almost universal habit of other flowers to develop in such a position the lower petal chiefly, that it may have its full share of light. You will find nothing but blunder and embarrassment result from any endeavour to enter into further particulars, such as "the relation of the dissepiment with respect to the valves of the capsule," etc., etc., since "in the various species of *Veronica* almost every kind of dehiscence may be observed" (C. under *V. perfoliata*, 1936, an Australian species). Sibthorpe gives the entire definition of *Veronica* with only one epithet added to mine, "*Corolla quadrifida, rotata, laciniâ infimâ angustiore*," but I do not know what 'rotata' here means, as there is no appearance of revolved action in the petals, so far as I can see.

17. Of the mythic or poetic significance of the veronica, there is less to be said than of its natural beauty. I have not been able to discover with what feeling, or at what time, its sacred name was originally given ; and the legend of *S. Veronica* herself is, in the substance of it, irrational, and therefore incredible. The meaning of the term 'rational,' as applied to a legend or miracle, is, that there has been an intelligible need for the permission of the miracle at the time when it is re-

corded ; and that the nature and manner of the act itself should be comprehensible in the scope. There was thus quite simple need for Christ to feed the multitudes, and to appear to S. Paul ; but no need, so far as human intelligence can reach, for the reflection of His features upon a piece of linen which could be seen by not one in a million of the disciples to whom He might more easily, at any time, manifest Himself personally and perfectly. Nor, I believe, has the story of S. Veronica ever been asserted to be other than symbolic by the sincere teachers of the Church ; and, even so far as in that merely explanatory function, it became the seal of an extreme sorrow, it is not easy to understand how the pen-sive fable was associated with a flower so familiar, so bright, and so popularly of good omen, as the Speedwell.

18. Yet, the fact being actually so, and this consecration of the veronica being certainly far more ancient and earnest than the faintly romantic and extremely absurd legend of the forget-me-not ; the Speedwell has assuredly the higher claim to be given and accepted as a token of pure and faithful love, and to be trusted as a sweet sign that the innocence of affection is indeed more frequent, and the appointed destiny of its faith more fortunate, than our inattentive hearts have hitherto discerned.

19. And this the more, because the recognized virtues and uses of the plant are real and manifold : and the ideas of a peculiar honourableness and worth of life connected with it by the German popular name ' Honour-prize ' ; while to the heart of the British race, the same thought is brought home by Shakespeare's adoption of the flower's Welsh name, for the faithfullest common soldier of his ideal king. As a lover's pledge, therefore, it does not merely mean memory ;—for, indeed, why should love be thought of as such at all, if it need to promise not to forget ?—but the blossom is significant also of the lover's best virtues, patience in suffering, purity in thought, gaiety in courage, and serenity in truth : and therefore I make it, worthily, the clasping and central flower of the Cytherides.

CHAPTER IV.

GIULIETTA.

1. SUPPOSING that, in early life, one had the power of living to one's fancy,—and why should we not, if the said fancy were restrained by the knowledge of the two great laws concerning our nature, that happiness is increased, not by the enlargement of the possessions, but of the heart ; and days lengthened, not by the crowding of emotions, but the economy of them ?—if thus taught, we had, I repeat, the ordering of our house and estate in our own hands, I believe no manner of temperance in pleasure would be better rewarded than that of making our gardens gay only with common flowers ; and leaving those which needed care for their transplanted life to be found in their native places when we travelled. So long as I had crocus and daisy in the spring, roses in the summer, and hollyhocks and pinks in the autumn, I used to be myself independent of farther horticulture,—and it is only now that I am old, and since pleasant travelling has become impossible to me, that I am thankful to have the white narcissus in my borders, instead of waiting to walk through the fragrance of the meadows of Clarens ; and pleased to see the milkwort blue on my scythe-mown banks, since I cannot gather it any more on the rocks of the Vosges, or in the divine glens of Jura.

2. Among the losses, all the more fatal in being unfelt, brought upon us by the fury and vulgarity of modern life, I count for one of the saddest, the loss of the wish to gather a flower in travelling. The other day,—whether indeed a sign of some dawning of doubt and remorse in the public mind, as to the perfect jubilee of railroad journey, or merely a piece of the common daily flattery on which the power of the British press first depends, I cannot judge ;—but, for one or other of such motives, I saw lately in some illustrated paper a pictorial comparison of old-fashioned and modern travel, representing, as the type of things passed away, the outside passengers of

the mail shrinking into huddled and silent distress from the swirl of a winter snowstorm ; and for type of the present Elysian dispensation, the inside of a first-class saloon carriage, with a beautiful young lady in the last pattern of Parisian travelling dress, conversing, Daily news in hand, with a young officer—her fortunate vis-à-vis—on the subject of our military successes in Afghanistan and Zululand.*

3. I will not, in presenting—it must not be called, the other side, but the supplementary, and wilfully omitted, facts, of this ideal,—oppose, as I fairly might, the discomforts of a modern cheap excursion train, to the chariot-and-four, with outriders and courier, of ancient noblesse. I will compare only the actual facts, in the former and in latter years, of my own journey from Paris to Geneva. As matters are now arranged, I find myself, at half-past eight in the evening, waiting in a confused crowd with which I am presently to contend for a seat, in the dim light and cigar-stench of the great station of the Lyons line. Making slow way through the hostilities of the platform, in partly real, partly weak politeness, as may be, I find the corner seats of course already full of prohibitory cloaks and umbrellas ; but manage to get a middle back one ; the net overhead is already surcharged with a bulging extra portmanteau, so that I squeeze my desk as well as I can between my legs, and arrange what wraps I have about my knees and shoulders. Follow a couple of hours of simple patience, with nothing to entertain one's thoughts but the steady roar of the line under the wheels, the blinking and dripping of the oil lantern, and the more or less ungainly wretchedness, and variously sullen compromises and encroachments of posture, among the five other passengers preparing themselves for sleep : the last arrangement for the night being to shut up both windows, in order to effect, with our six breaths, a salutary modification of the night air.

4. The banging and bumping of the carriages over the turntables wakes me up as I am beginning to doze, at Fontainebleau, and again at Sens ; and the trilling and thrilling of the

* See letter on the last results of our African campaigns, in the *Morning Post* of April 14th, of this year.

little telegraph bell establishes itself in my ears, and stays there, trilling me at last into a shivering, suspicious sort of sleep, which, with a few vaguely fretful shrugs and fidgets, carries me as far as Tonnerre, where the 'quinze minutes d'arret' revolutionize everything; and I get a turn or two on the platform, and perhaps a glimpse of the stars, with promise of a clear morning; and so generally keep awake past Mont Bard, remembering the happy walks one used to have on the terrace under Buffon's tower, and thence watching, if perchance, from the mouth of the high tunnel, any film of moonlight may show the far undulating masses of the hills of Citeaux. But most likely one knows the place where the great old view used to be only by the sensible quickening of the pace as the train turns down the incline, and crashes through the trenched cliffs into the confusion and high clattering vault of the station at Dijon.

5. And as my journey is almost always in the spring-time, the twisted spire of the cathedral usually shows itself against the first grey of dawn, as we run out again southwards; and resolving to watch the sunrise, I fall more complacently asleep,—and the sun is really up by the time one has to change carriages, and get morning coffee at Macon. And from Ambérieux, through the Jura valley, one is more or less feverishly happy and thankful, not so much for being in sight of Mont Blanc again, as in having got through the nasty and gloomy night journey; and then the sight of the Rhone and the Salève seems only like a dream, presently to end in nothingness; till, covered with dust, and feeling as if one never should be fit for anything any more, one staggers down the hill to the Hotel des Bergues, and sees the dirtied Rhone, with its new iron bridge, and the smoke of a new factory exactly dividing the line of the aiguilles of Chamouni.

6. That is the journey as it is now,—and as, for me, it must be; except on foot, since there is now no other way of making it. But this *was* the way we used to manage it in old days:—

Very early in Continental transits we had found out that the family travelling carriage, taking much time and ingenuity to load, needing at the least three, usually four—horses, and

on Alpine passes six, not only jolted and lagged painfully on bad roads, but was liable in every way to more awkward discomfitures than lighter vehicles; getting itself jammed in archways, wrenched with damage out of ruts, and involved in volleys of justifiable réprobation among market stalls. So when we knew better, my father and mother always had their own old-fashioned light two-horse carriage to themselves, and I had one made with any quantity of front and side pockets for books and picked up stones; and hung very low, with a fixed side-step, which I could get off or on with the horses at the trot; and at any rise or fall of the road, relieve them, and get my own walk, without troubling the driver to think of me.

7. Thus, leaving Paris in the bright spring morning, when the Seine glittered gaily at Charenton, and the arbres de Judée were mere pyramids of purple bloom round Villeneuve-St.-Georges, one had an afternoon walk among the rocks of Fontainebleau, and next day we got early into Sens, for new lessons in its cathedral aisles, and the first saunter among the budding vines of the coteaux. I finished my plate of the Tower of Giotto, for the 'Seven Lamps,' in the old inn at Sens, which Dickens has described in his wholly matchless way in the last chapter of 'Mrs. Lirriper's Lodgings.' The next day brought us to the oolite limestones at Mont Bard, and we always spent the Sunday at the Bell in Dijon. Monday, the drive of drives, through the village of Genlis, the fortress of Auxonne, and up the hill to the vine-surrounded town of Dole; whence, behold at last the limitless ranges of Jura, south and north, beyond the woody plain, and above them the 'Derniers Rochers' and the white square-set summit, worshipped ever anew. Then at Poligny, the same afternoon, we gathered the first milkwort for that year; and on Tuesday, at St. Laurent, the wild lily of the valley; and on Wednesday, at Morez, gentians.

And on Thursday, the *eighth or ninth* day from Paris, days all spent patiently and well, one saw from the gained height of Jura, the great Alps unfold themselves in their chains and wreaths of incredible crest and cloud.

8. Unhappily, during all the earliest and usefulest years of

such travelling, I had no thought of ever taking up botany as a study ; feeling well that even geology, which was antecedent to painting with me, could not be followed out in connection with art but under strict limits, and with sore shortcomings. It has only been the later discovery of the uselessness of old scientific botany, and the abominableness of new, as an element of education for youth ;—and my certainty that a true knowledge of their native Flora was meant by Heaven to be one of the first heart-possessiones of every happy boy and girl in flower-bearing lands, that have compelled me to gather into system my fading memories, and wandering thoughts. And of course in the diaries written at places of which I now want chiefly the details of the Flora, I find none ; and in this instance of the milkwort, whose name I was first told by the Chamouni guide, Joseph Couttet, then walking with me on the unperilous turf of the first rise of the Vosges, west of Strasburg, and rebuking me indignantly for my complaint that, being then thirty-seven years old, and not yet able to draw the great plain and distant spire, it was of no use trying in the poor remainder of life to do anything serious,—then, and there, I say, for the first time examining the strange little flower, and always associating it, since, with the limestone crags of Alsace and Burgundy,* I don't find a single note of its preferences or antipathies in other districts, and cannot say a word about the soil it chooses, or the height it ventures, or the familiarities to which it condescends, on the Alps or Apennines.

9. But one thing I have ascertained of it, lately at Brantwood, that it is capricious and fastidious beyond any other little blossom I know of. In laying out the rock garden, most of the terrace sides were trusted to remnants of the natural slope, propped by fragments of stone, among which nearly every other wild flower that likes sun and air, is glad sometimes to root itself. But at the top of all, one terrace was brought to mathematically true level of surface, and slope of

* I deliberately, not garrulously, allow more autobiography in 'Proserpina' than is becoming, because I know not how far I may be permitted to carry on that which was begun in 'Fors.'

side, and turfed with delicately chosen and adjusted sods, meant to be kept duly trim by the scythe. And *only* on this terrace does the Giulietta choose to show herself,—and even there, not in any consistent places, but gleaming out here in one year, there in another, like little bits of unexpected sky through cloud ; and entirely refusing to allow either bank or terrace to be mown the least trim during *her* time of disport there. So spared and indulged, there are no more wayward things in all the woods or wilds ; no more delicate and perfect things to be brought up by watch through day and night, than her recumbent clusters, trickling, sometimes almost gushing through the grass, and meeting in tiny pools of flawless blue.

10. I will not attempt at present to arrange the varieties of the Giulietta, for I find that all the larger and presumably characteristic forms belong to the Cape ; and only since Mr. Froude came back from his African explorings have I been able to get any clear idea of the brilliancy and associated infinitude of the Cape flowers. If I could but write down the substance of what he has told me, in the course of a chat or two, which have been among the best privileges of my recent stay in London, (prolonged as it has been by recurrence of illness,) it would be a better summary of what should be generally known in the natural history of southern plants than I could glean from fifty volumes of horticultural botany. In the meantime, everything being again thrown out of gear by the aforesaid illness, I must let this piece of 'Proserpina' break off, as most of my work does—and as perhaps all of it may soon do—leaving only suggestion for the happier research of the students who trust me thus far.

11. Some essential points respecting the flower I shall note, however, before ending. There is one large and frequent species of it of which the flowers are delicately yellow, touched with tawny red forming one of the chief elements of wild foreground vegetation in the healthy districts of hard Alpine limestone.* This is, I believe, the only European type of the large

* In present Botany, *Polygala Chamæbuxus*; C. 316: or, in English, Much Milk Ground-box. It is not, as matters usually go, a name to be

Cape varieties, in all of which, judging from such plates as have been accessible to me, the crests or fringes of the lower petal are less conspicuous than in the smaller species; and the flower almost takes the aspect of a broom-blossom or pease-blossom. In the smaller European varieties, the white fringes of the lower petal are the most important and characteristic part of the flower, and they are, among European wild flowers, absolutely without any likeness of associated structure. The fringes or crests which, towards the origin of petals, so often give a frosted or gemmed appearance to the centres of flowers, are here thrown to the extremity of the petal, and suggest an almost coralline structure of blossom, which in no other instance whatever has been imitated, still less carried out into its conceivable varieties of form. How many such varieties might have been produced if these fringes of the *Giulietta*, or those already alluded to of *Lucia nivea*, had been repeated and enlarged; as the type, once adopted for complex bloom in the thistle-head, is multiplied in the innumerable gradations of thistle, teasel, hawkweed, and aster! We might have had flowers edged with lace finer than was ever woven by mortal fingers, or tasselled and braided with fretwork of silver, never tarnished—or hoarfrost that grew brighter in the sun. But it was not to be, and after a few hints of what might be done in this kind, the Fate, or Folly, or, on recent theories, the extreme fitness—and consequent survival, of the Thistles and Dandelions, entirely drives the fringed *Lucias* and blue-flushing milkworts out of common human neighbourhood, to live recluse lives with the memories of the abbots of Cluny, and pastors of Piedmont.

12. I have called the *Giulietta* ‘blue-flushing’ because it is

ill thought of, as it really contains three ideas; and the plant does, without doubt, somewhat resemble box, and grows on the ground;—far more fitly called ‘ground-box’ than the *Veronica* ‘ground-oak.’ I want to find a pretty name for it in connection with Savoy or Dauphiné, where it indicates, as above stated, the *healthy* districts of *hard* limestone. I do not remember it as ever occurring among the dark and moist shales of the inner mountain ranges, which at once confine and pollute the air.

one of the group of exquisite flowers which at the time of their own blossoming, breathe their colour into the surrounding leaves and supporting stem. Very notably the Grape hyacinth and Jura hyacinth, and some of the Vestals, empurpling all their green leaves even to the ground: a quite distinct nature in the flower, observe, this possession of a power to kindle the leaf and stem with its own passion, from that of the heaths, roses, or lilies, where the determined bracts or calices assert themselves in opposition to the blossom, as little pine-leaves, or mosses, or brown-paper packages, and the like.

13. The *Giulietta*, however, is again entirely separate from the other leaf-flushing blossoms, in that, after the two green leaves next the flower have glowed with its blue, while it lived, they do not fade or waste with it, but return to their own former green simplicity, and close over it to protect the seed. I only know this to be the case with the *Giulietta Regina*; but suppose it to be (with variety of course in the colours) a condition in other species,—though of course nothing is ever said of it in the botanical accounts of them. I gather, however, from Curtis's careful drawings that the prevailing colour of the Cape species is purple, thus justifying still further my placing them among the *Cytherides*; and I am content to take the descriptive epithets at present given them, for the following five of this southern group, hoping that they may be explained for me afterwards by helpful friends.

14. *Bracteolata*, C. 345.

Oppositifolia, C. 492.

Speciosa, C. 1790.

These three all purple, and scarcely distinguishable from sweet pease-blossom, only smaller.

Stipulacea, C. 1715. Small, and very beautiful, lilac and purple, with a leaf and mode of growth like rosemary. The "Foxtail" milkwort, whose name I don't accept, C. 1006, is intermediate between this and the next species.

15. *Mixta*, C. 1714. I don't see what mingling is meant, except that it is just like *Erica tetralix* in the leaf, only, apparently, having little four-petalled pinks for blossoms. This

appearance is thus botanically explained. I do not myself understand the description, but copy it, thinking it may be of use to somebody. "The apex of the carina is expanded into a two-lobed plain petal, the lobes of which are emarginate. This appendix is of a bright rose colour, and forms the principal part of the flower." The describer relaxes, or relapses, into common language so far as to add that 'this appendix' "dispersed among the green foliage in every part of the shrub, gives it a pretty lively appearance."

Perhaps this may also be worth extracting.

"Carina, deeply channelled, of a saturated purple within, sides folded together, so as to include and firmly embrace the style and stamens, which, when arrived at maturity, upon being moved, escape elastically from their confinement, and strike against the two erect petals or alæ—by which the pollen is dispersed.

"Stem shrubby, with long flexile branches." (Length or height not told. I imagine like an ordinary heath's.)

The term 'carina,' occurring twice in the above description, is peculiar to the structure of the pease and milkworts; we will examine it afterwards. The European varieties of the milkwort, except the chamæbuxus, are all minute,—and, their ordinary epithets being at least inoffensive, I give them for reference till we find prettier ones; altering only the Calcareæ, because we could not have a 'Chalk Juliet,' and two varieties of the Regina, changed for reason good—her name, according to the last modern refinements of grace and ease in pronunciation, being *Eu-vulgaris*, var. *genuina*! My readers may more happily remember her and her sister as follows:—

16. (I.) *Giulietta Regina*. Pure Blue. The same in colour, form, and size throughout Europe.

(II.) *Giulietta Soror-Reginæ*. Pale, reddish-blue or white in the flower, and smaller in the leaf, otherwise like the Regina.

(III.) *Giulietta Depressa*. The smallest of those I can find drawings of. Flowers, blue; lilac in the fringe, and no bigger than pins' heads; the leaves quite gem-like in minuteness and order.

(iv.) *Giulietta Cisterciana*. Its present name 'Calcareæ,' is meant, in botanic Latin, to express its growth on limestone or chalk mountains. But we might as well call the South Down sheep, Calcareous mutton. My epithet will rightly associate it with the Burgundian hills round Cluny and Citeaux. Its ground leaves are much larger than those of the *Depressa*; the flower a little larger, but very pale.

(v.) *Giulietta Austriaca*. Pink, and very lovely, with bold cluster of ground leaves, but itself minute—almost dwarf. Called 'small bitter milkwort' by S. How far distinct from the next following one, *Norwegian*, is not told.

The above five kinds are given by Sowerby as British, but I have never found the *Austriaca* myself.

(vi.) *Giulietta Amara*. *Norwegian*. Very quaint in blossom outline, like a little blue rabbit with long ears. D. 1169.

17. Nobody tells me why either this last or No. 5 have been called bitter; and Gerarde's five kinds are distinguished only by colour—blue, red, white, purple, and "the dark, of an overworn ill-favoured colour, which maketh it to differ from all others of his kind." I find no account of this ill-favoured one elsewhere. The white is my *Soror Reginæ*; the red must be the *Austriaca*; but the purple and overworn ones are perhaps now overworn indeed. All of them must have been more common in Gerarde's time than now, for he goes on to say "*Milkwort* is called *Ambarualis flos*, so called because it doth specially flourish in the Crosse or Gang-weeke, or Rogation-weeke, of which flowers, the maidens which use in the countries to walk the procession do make themselves garlands and noseгаies, in English we may call it Crosse flower, Gang flower, Rogation flower, and Milk-wort."

18. Above, at page 151, vol. i., in first arranging the *Cytherides*, I too hastily concluded that the ascription to this plant of helpfulness to nursing mothers was 'more than ordi-

narily false'; thinking that its rarity could never have allowed it to be fairly tried. If indeed true, or in any degree true, the flower has the best right of all to be classed with the Cytherides, and we might have as much of it for beauty and for service as we chose, if we only took half the pains to garnish our summer gardens with living and life-giving blossom, that we do to garnish our winter gluttonies with dying and useless ones.

19. I have said nothing of root, or fruit, or seed, having never had the hardness of heart to pull up a milkwort cluster—nor the chance of watching one in seed:—The pretty thing vanishes as it comes, like the blue sky of April, and leaves no sign of itself—that *I* ever found. The botanists tell me that its fruit “dehiscens loculicidally,” which I suppose is botanic for “splits like boxes,” (but boxes shouldn't split, and didn't, as we used to make and handle them before railways). Out of the split boxes fall seeds—too few; and, as aforesaid, the plant never seems to grow again in the same spot. I should thankfully receive any notes from friends happy enough to live near milkwort banks, on the manner of its nativity.

20. Meanwhile, the Thistle, and the Nettle, and the Dock, and the Dandelion are cared for in their generations by the finest arts of—Providence, shall we say? or of the spirits appointed to punish our own want of Providence? May I ask the reader to look back to the seventh chapter of the first volume, for it contains suggestions of thoughts which came to me at a time of very earnest and faithful inquiry, set down, I now see too shortly, under the press of reading they involved, but intelligible enough if they are read as slowly as they were written, and especially note the paragraph of summary of p. 86 on the power of the Earth Mother, as Mother, and as *Judge*; watching and rewarding the conditions which induce adversity and prosperity in the kingdoms of men: comparing with it carefully the close of the fourth chapter, p. 63,* which contains, for the now recklessly multiplying classes

* Which, with the following page, is the summary of many chapters of 'Modern Painters: ' and of the aims kept in view throughout 'Mu-

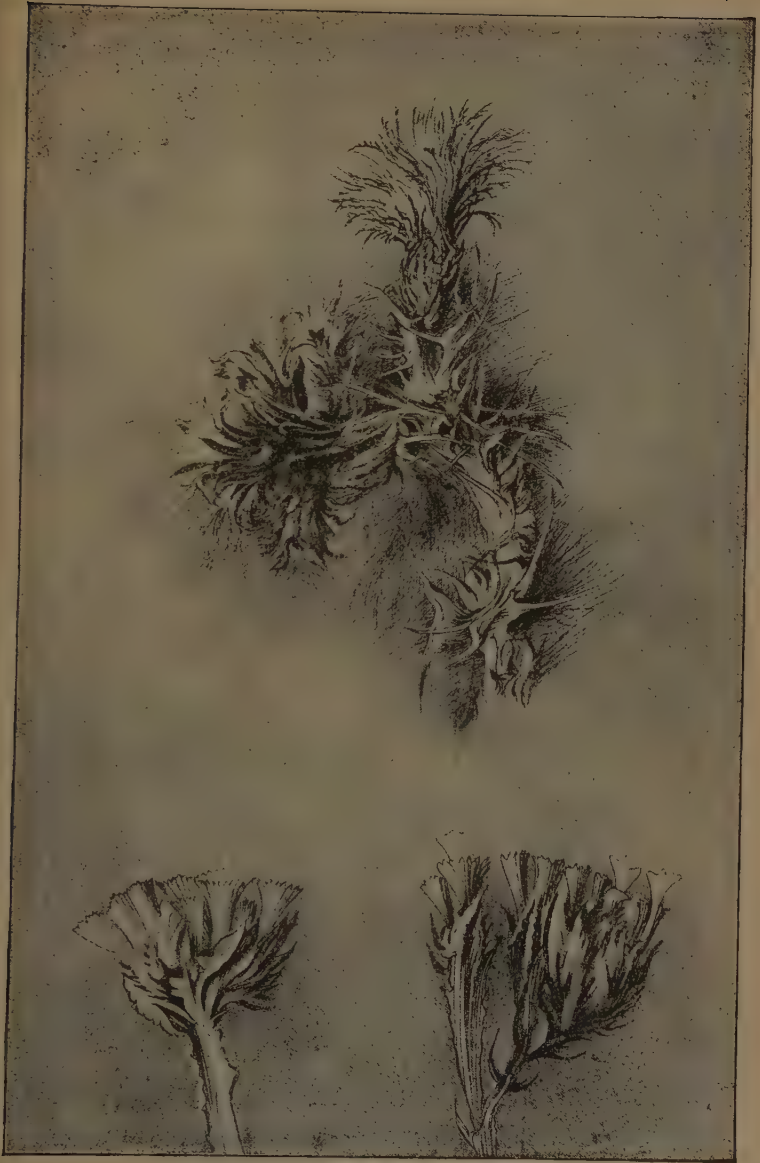


PLATE XI.--STATES OF ADVERSITY.

of artists and colonists; truths essential to their skill, and inexorable upon their labour.

21. The pen-drawing facsimiled by Mr. Allen with more than his usual care in the frontispiece to this number of 'Proserpina,' was one of many executed during the investigation of the schools of Gothic (German, and later French), which founded their minor ornamentation on the serration of the thistle leaf, as the Greeks on that of the Acanthus, but with a consequent, and often morbid, love of thorny points, and insistance upon jagged or knotted intricacies of stubborn vegetation, which is connected in a deeply mysterious way with the gloomier forms of Catholic asceticism.*

22. But also, in beginning 'Proserpina,' I intended to give many illustrations of the light and shade of foreground leaves belonging to the nobler groups of thistles, because I thought they had been neglected by ordinary botanical draughtsmen; not knowing at that time either the original drawings at Oxford for the 'Flora Græca,' or the nobly engraved plates executed in the close of the last century for the 'Flora Danica' and 'Flora Londinensis.' The latter is in the most difficult portraiture of the larger plants, even the more wonderful of the two; and had I seen the miracles of skill, patience, and faithful study which are collected in the first and second volumes, published in 1777 and 1798, I believe my own work would never have been undertaken.† Such as it is, however, I may still, health being granted me, persevere in it; for my own leaf and branch studies express conditions of shade which even these most ex-

nera Pulveris.' The three kinds of Desert specified—of Reed, Sand, and Rock—should be kept in mind as exhaustively including the states of the earth neglected by man. For instance of a Reed desert, produced *merely* by his neglect, see Sir Samuel Baker's account of the choking up of the bed of the White Nile. Of the sand desert, Sir F. Palgrave's journey from the Djowf to Häyel, vol. i, p. 92.

* This subject is first entered on in the 'Seven Lamps,' and carried forward in the final chapters of 'Modern Painters,' to the point where I hope to take it up for conclusion, in the sections of 'Our Fathers have told us' devoted to the history of the fourteenth century.

† See in the first volume, the plates of *Sonchus Arvensis* and *Tussilago Petasites*; in the second, *Carduus tomentosus* and *Picris Echioides*.

quisite botanical plates ignore ; and exemplify uses of the pen and pencil which cannot be learned from the inimitable fineness of line engraving. The frontispiece to this number, for instance, (a seeding head of the commonest field-thistle of our London suburbs,) copied with a steel pen on smooth grey paper, and the drawing softly touched with white on the nearer thorns, may well surpass the effect of the plate.

23. In the following number of 'Proserpina' I have been tempted to follow, with more minute notice than usual, the 'conditions of adversity' which, as they fret the thistle tribe into jagged malice, have humbled the beauty of the great domestic group of the Vestals into confused likenesses of the Dragonweed and Nettle: but I feel every hour more and more the necessity of separating the treatment of subjects in 'Proserpina' from the microscopic curiosities of recent botanic illustration, nor shall this work close, if my strength hold, without fulfilling in some sort, the effort begun long ago in 'Modern Painters,' to interpret the grace of the larger blossoming trees, and the mysteries of leafy form which clothe the Swiss precipice with gentleness, and colour with softest azure the rich horizons of England and Italy.

INDEX I.

DESCRIPTIVE NOMENCLATURE.

PLANTS in perfect form are said, at page 22, to consist of four principal parts: root, stem, leaf, and flower. (Compare Chapter V., § 2.) The reader may have been surprised at the omission of the fruit from this list. But a plant which has borne fruit is no longer of 'perfect' form. Its flower is dead. And, observe, it is further said, at page 49, (and compare Chapter III., § 2,) that the use of the fruit is to produce the flower: not of the flower to produce the fruit. Therefore, the plant in perfect blossom, is itself perfect. Nevertheless, the formation of the fruit, practically, is included in the flower, and so spoken of in the fifteenth line of the same page.

Each of these four main parts of a plant consist normally of a certain series of minor parts, to which it is well to attach easily remembered names. In this section of my index I will not admit the confusion of idea involved by alphabetical arrangement of these names, but will sacrifice facility of reference to clearness of explanation, and taking the four great parts of the plant in succession, I will give the list of the minor and constituent parts, with their names as determined in *Proserpina*, and reference to the pages where the reasons for such determination are given, endeavouring to supply, at the same time, any deficiencies which I find in the body of the text.

I. THE ROOT.

	PAGE
Origin of the word Root.....	23
The offices of the root are threefold: namely, Tenure, Nourishment, and Animation	23-28
The essential parts of a Root are two: the Limbs and Fibres.....	27
I. THE LIMB is the gathered mass of fibres, or at least of fibrous substance, which extends itself in search of nourishment ...	26
II. THE FIBRE is the organ by which the nourishment is received	27
The inessential or accidental parts of roots, which are attached to the roots of some plants, but not to those of others, (and are, indeed, for the most part absent,) are three: namely, Store-Houses, Refuges, and Ruins.....	27
III. STORE-HOUSES contain the food of the future plant.....	27
IV. REFUGES shelter the future plant itself for a time.....	28
V. RUINS form a basis for the growth of the future plant in its proper order.....	29
Root-Stocks, the accumulation of such ruins in a vital order	30
General questions relating to the office and chemical power of roots	31

The nomenclature of Roots will not be extended, in *Proserpina*, beyond the five simple terms here given: though the ordinary botanical ones—corn, bulb, tuber, etc.—will be severally explained in connection with the plants which they specially characterize.

II. THE STEM.

Derivation of word.....	96
The channel of communication between leaf and root	107
In a perfect plant it consists of three parts:	
I. THE STEM (STEMMA) proper.—A growing or advancing shoot which sustains all the other organs of the plant	96
It may grow by adding thickness to its sides without advancing; but its essential characteristic is the vital power of Advance.	96

	PAGE
It may be round, square, or polygonal, but is always roundly minded.....	96
Its structural power is Spiral	96
It is essentially branched ; having subordinate leaf-stalks and flower-stalks, if not larger branches	98
It develops the buds, leaves, and flowers of the plant.	
This power is not yet properly defined, or explained ; and referred to only incidentally throughout the eighth chapter	94-97
II. THE LEAF-STALK (CYMBA) sustains, and expands itself into, the Leaf.....	94, 95
It is essentially furrowed above, and convex below.....	95
It is to be called in Latin, the Cymba ; in English, the Leaf-Stalk	95
III. THE FLOWER-STALK (PETIOLUS):	
It is essentially round	92
It is usually separated distinctly at its termination from the flower.....	92, 93
It is to be called in Latin, Petiolus ; in English, Flower-stalk	
These three are the essential parts of a stem. But besides these, it has, when largely developed, a permanent form : namely,	
IV. THE TRUNK.—A non-advancing mass of collected stem, arrested at a given height from the-ground.....	98
The stems of annual plants are either leafy, as of a thistle, or bare, sustaining the flower or flower-cluster at a certain height above the ground. Receiving therefore these following names:—	
V. THE VIRGA.—The leafy stem of an annual plant, not a grass, yet growing upright.....	104
VI. THE VIRGULA.—The leafless flower-stem of an annual plant, not a grass, as of a primrose or dandelion.....	104

VII. THE FILUM.—The running stem of a creeping plant.

It is not specified in the text for use ; but will be necessary ; so also, perhaps, the *Stelechos*, or stalk proper (26, p. 104) the branched stem of an annual plant, not a grass ; one cannot well talk of the *Virga* of hemlock. The '*Stolon*' is explained in its classical sense at page 100, but I believe botanists use it otherwise. I shall have occasion to refer to, and complete its explanation, in speaking of bulbous plants.

VIII. THE CAUDEX.—The essentially ligneous and compact part of a stem. 105

This equivocal word is not specified for use in the text, but I mean to keep it for the accumulated stems of inlaid plants, palms, and the like ; for which otherwise we have no separate term.

IX. THE AVENA.—Not specified in the text at all ; but it will be prettier than '*baculus*,' which is that I had proposed, for the '*staff*' of grasses. See page 113.

These ten names are all that the student need remember ; but he will find some interesting particulars respecting the following three, noticed in the text :—

STIPS.—The origin of stipend, stupid, and stump. 104

STIPULA.—The subtlest Latin term for straw. 104

CAULIS (Kale).—The peculiar stem of branched eatable vegetables 105

CANNA.—Not noticed in the text ; but likely to be sometimes useful for the stronger stems of grasses.

III. THE LEAF.

Derivation of word. 22

The Latin form '*folium*'. 32

The Greek form '*petalos*'. 33

Veins and ribs of leaves, to be usually summed under the term '*rib*' 34

Chemistry of leaves. 36

The nomenclature of the leaf consists, in botanical books, of little more than barbarous, and, for the general reader, totally useless attempts to describe their forms in Latin. But

their forms are infinite and indescribable except by the pencil. I will give central types of form in the next volume of *Proserpina*; which, so that the reader sees and remembers, he may *call* anything he likes. But it is necessary that names should be assigned to certain classes of leaves which are essentially different from each other in character and tissue, not merely in form. Of these the two main divisions have been already given: but I will now add the less important ones which yet require distinct names.

- I. APOLLINE.—Typically represented by the laurel..... 39
- II. ARETHUSAN.—Represented by the alisma..... 40

It ought to have been noticed that the character of serration, within reserved limits, is essential to an Apolline leaf, and absolutely refused by an Arethusan one.

- III. DRYAD.—Of the ordinary leaf tissue, neither manifestly strong, nor admirably tender, but serviceably consistent, which we find generally to be the substance of the leaves of forest trees. Typically represented by those of the oak.
- IV. ABIETINE.—Shaft or sword-shape, as the leaves of firs and pines.
- V. CRESSIC.—Delicate and light, with smooth tissue, as the leaves of cresses, and clover.
- VI. SALVIAN.—Soft and woolly, like miniature blankets, easily folded, as the leaves of sage.
- VII. CAULINE.—Softly succulent, with thick central ribs, as of the cabbage.
- VIII. ALOEINE.—Inflexibly succulent, as of the aloe or houseleek.

No rigid application of these terms must ever be attempted; but they direct the attention to important general conditions, and will often be found to save time and trouble in description.

IV. THE FLOWER.

- Its general nature and function 49
- Consists essentially of Corolla and Treasury 58
- Has in perfect form the following parts:—

- I. THE TORUS.—Not yet enough described in the text. It is the expansion of the extremity of the flower-stalk, in preparation for the support of the expanding flower..... 50-154

- | | PAGE |
|---|------|
| II. THE INVOLUCRUM.—Any kind of wrapping or propping condition of leafage at the base of a flower may properly come under this head ; but the manner of prop or protection differs in different kinds, and I will not at present give generic names to these peculiar forms. | |
| III. THE CALYX (The Hiding-place).—The outer whorl of leaves, under the protection of which the real flower is brought to maturity. Its separate leaves are called SEPALS..... | 59 |
| IV. THE COROLLA (The Cup).—The inner whorl of leaves, forming the flower itself. Its separate leaves are called PETALS . | 53 |
| V. THE TREASURY.—The part of the flower that contains its seeds. | |
| VI. THE PILLAR.—The part of the flower above its treasury, by which the power of the pollen is carried down to the seeds.. | 58 |
| It consists usually of two parts—the SHAFT and VOLUTE.. | |
| When the pillar is composed of two or more shafts, attached to separate treasury-cells, each cell with its shaft is called a CARPEL | |
| | 162 |
| VII. THE STAMENS.—The parts of the flower which secrete its pollen | 58 |
| They consist usually of two parts, the FILAMENT and ANTHER, not yet described. | |
| VIII. THE NECTARY.—The part of the flower containing its honey, or any other special product of its inflorescence. The name has often been given to certain forms of petals of which the use is not yet known. No notice has yet been taken of this part of the flower in Proserpina. | |

These being all the essential parts of the flower itself, other forms and substances are developed in the seed as it ripens, which, I believe, may most conveniently be arranged in a separate section, though not logically to be considered as separable from the flower, but only as mature states of certain parts of it.

V. THE SEED.

I must once more desire the reader to take notice that, under the four sections already defined, the morphology of the plant is to be considered as complete, and that we are now only to examine and name, farther, its *product*; and that not so much as the germ of its own future descendant flower, but as a separate substance which it is appointed to form, partly to its own detriment, for the sake of higher creatures. This product consists essentially of two parts: the Seed and its Husk.

	PAGE
I. THE SEED.—Defined.....	152
It consists, in its perfect form, of three parts	153
These three parts are not yet determinately named in the text: but I give now the names which will be usually attached to them.	
A. <i>The Sacque</i> .—The Outside skin of a seed.....	152
B. <i>The Nutrine</i> .—A word which I coin, for general applicability, whether to the farina of corn, the substance of a nut, or the parts that become the first leaves in a bean	152
C. <i>The Germ</i> .—The origin of the root	152
II. THE HUSK.—Defined.....	153
Consists, like the seed when in perfect form, of three parts.	
A. <i>The Skin</i> .—The outer envelope of all the seed structures ..	153
B. <i>The Rind</i> .—The central body of the Husk	153-162
C. <i>The Shell</i> .—Not always shelly, yet best described by this general term; and becoming a shell, so called, in nuts, peaches, dates, and other such kernel-fruits	153

The products of the Seed and Husk of Plants, for the use of animals, are practically to be massed under the three heads of BREAD, OIL, and FRUIT. But the substance of which bread is made is more accurately described as Farina; and the

pleasantness of fruit to the taste depends on two elements in its substance: the juice, and the pulp containing it, which may properly be called Nectar and Ambrosia. We have therefore in all four essential products of the Seed and Husk—

A. Farina.	Flour	156
B. Oleum.	Oil.....	158
C. Nectar.	Fruit-juice.....	158
D. Ambrosia.	Fruit-substance.....	158

Besides these all-important products of the seed, others are formed in the stems and leaves of plants, of which no account hitherto has been given in *Proserpina*. I delay any extended description of these until we have examined the structure of wood itself more closely; this intricate and difficult task having been remitted (p. 122) to the days of coming spring; and I am well pleased that my younger readers should at first be vexed with no more names to be learned than those of the vegetable productions with which they are most pleasantly acquainted: but for older ones, I think it well, before closing the present volume, to indicate, with warning, some of the obscurities, and probable fallacies, with which this vanity of science encumbers the chemistry, no less than the morphology, of plants.

Looking back to one of the first books in which our new knowledge of organic chemistry began to be displayed, thirty years ago, I find that even at that period the organic elements which the cuisine of the laboratory had already detected in simple Indigo, were the following:—

Isatine,	Chlorindine,
Bromisatine,	Chlorindoptene,
Bibromisatine;	Chlorindatmit;
Chlorisatine,	Chloranile,
Bichlorisatine;	Chloranilam; and,
Chlorisatyde,	Chloranilammon.
Bichlorisatyde;	

And yet, with all this practical skill in decoction, and accumulative industry in observation and nomenclature, so far are our scientific men from arriving, by any decoctive process of their own knowledge, at general results useful to ordinary human creatures, that when I wish now to separate, for young scholars, in first massive arrangement of vegetable productions, the Substances of Plants from their Essences; that is to say, the weighable and measurable body of the plant from its practically immeasurable, if not imponderable, spirit, I find in my three volumes of close-printed chemistry, no information whatever respecting the quality of volatility in matter, except this one sentence:—

“The disposition of various substances to yield vapour is very different: and the difference depends doubtless on the relative power of cohesion with which they are endowed.”*

Even in this not extremely pregnant, though extremely cautious, sentence, two conditions of matter are confused, no notice being taken of the difference in manner of dissolution between a vitally fragrant and a mortally putrid substance.

It is still more curious that when I look for more definite instruction on such points to the higher ranks of botanists, I find in the index to Dr. Lindley's ‘Introduction to Botany’—seven hundred pages of close print—not one of the four words ‘Volatile,’ ‘Essence,’ ‘Scent,’ or ‘Perfume.’ I examine the index to Gray's ‘Structural and Systematic Botany,’ with precisely the same success. I next consult Professors Balfour and Grindon, and am met by the same dignified silence. Finally, I think over the possible chances in French, and try in Figuier's indices to the ‘Histoire des Plantes’ for ‘Odeur’—no such word! ‘Parfum’—no such word. ‘Essence’—no such word. ‘Encens’—no such word. I try at last ‘Pois de Senteur,’ at a venture, and am referred to a page which describes their going to sleep.

Left thus to my own resources, I must be content for the present to bring the subject at least under safe laws of nomenclature. It is possible that modern chemistry may be entirely

* “Elements of Chemistry,” p. 44. By Edward Turner; edited by Justus Liebig and William Gregory. Taylor and Walton, 1840.

right in alleging the absolute identity of substances such as albumen, or fibrine, whether they occur in the animal or vegetable economies. But I do not choose to assume this identity in my nomenclature. It may, perhaps, be very fine and very instructive to inform the pupils preparing for competitive examination that the main element of Milk is Milking, and of Cheese, Cheesine. But for the practical purposes of life, all that I think it necessary for the pupil to know is that in order to get either milk or cheese, he must address himself to a Cow, and not to a Pump; and that what a chemist can produce for him out of dandelions or cocoanuts, however milky or cheesy it may look, may more safely be called by some name of its own.

This distinctness of language becomes every day more desirable, in the face of the refinements of chemical art which now enable the ingenious confectioner to meet the demands of an unscientific person for (suppose) a lemon drop, with a mixture of nitric acid, sulphur, and stewed bones. It is better, whatever the chemical identity of the products may be, that each should receive a distinctive epithet, and be asked for and supplied, in vulgar English, and vulgar probity, either as essence of lemons, or skeletons.

I intend, therefore,—and believe that the practice will be found both wise and convenient,—to separate in all my works on natural history the terms used for vegetable products from those used for animal or mineral ones, whatever may be their chemical identity, or resemblance in aspect. I do not mean to talk of fat in seeds, nor of flour in eggs, nor of milk in rocks. Pace my prelatical friends, I mean to use the word ‘Alb’ for vegetable albumen; and although I cannot without pedantry avoid using sometimes the word ‘milky’ of the white juices of plants, I must beg the reader to remain unaffected in his conviction that there is a vital difference between liquids that coagulate into butter, or congeal into India-rubber. Oil, when used simply, will always mean a vegetable product; and when I have occasion to speak of petroleum, tallow, or blubber, I shall generally call these substances by their right names.

There are also a certain number of vegetable materials more or less prepared, secreted, or digested for us by animals, such as wax, honey, silk, and cochineal. The properties of these require more complex definitions, but they have all very intelligible and well-established names. 'Tea' must be a general term for an extract of any plant in boiling water: though when standing alone the word will take its accepted Chinese meaning: and essence, the general term for the condensed dew of a vegetable vapour, which is with grace and fitness called the 'being' of a plant, because its properties are almost always characteristic of the species; and it is not, like leaf tissue or wood fibre, approximately the same material in different shapes; but a separate element in each family of flowers, of a mysterious, delightful, or dangerous influence, logically inexplicable, chemically inconstructible, and wholly, in dignity of nature, above all modes and faculties of form.

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ARIADNE FLORENTINA

SIX LECTURES

ON

WOOD AND METAL ENGRAVING

WITH APPENDIX

GIVEN BEFORE THE UNIVERSITY OF OXFORD, IN
MICHAELMAS TERM, 1872

BY

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ARIADNE FLORENTINA.

SIX LECTURES

ON

WOOD AND METAL ENGRAVING.

LECTURE I.

DEFINITION OF THE ART OF ENGRAVING.

1. THE entrance on my duty for to-day begins the fourth year of my official work in Oxford ; and I doubt not that some of my audience are asking themselves, very doubtfully—at all events, I ask myself, very anxiously—what has been done.

For practical result, I have not much to show. I announced, a fortnight since, that I would meet, the day before yesterday, any gentleman who wished to attend this course for purposes of study. My class, so minded, numbers four, of whom three wish to be artists, and ought not therefore, by rights, to be at Oxford at all ; and the fourth is the last remaining unit of the class I had last year.

2. Yet I neither in this reproach myself, nor, if I could, would I reproach the students who are not here. I do not reproach myself ; for it was impossible for me to attend properly to the schools and to write the grammar for them at the same time ; and I do not blame the absent students for not attending a school from which I have generally been absent

myself. In all this, there is much to be mended, but, in true light, nothing to be regretted.

I say, I had to write my school grammar. These three volumes of lectures under my hand,* contain carefully set down, the things I want you first to know. None of my writings are done fluently; the second volume of *Modern Painters* was all of it written twice—most of it, four times,—over; and these lectures have been written, I don't know how many times. You may think that this was done merely in an author's vanity, not in a tutor's care. To the vanity I plead guilty,—no man is more intensely vain than I am; but my vanity is set on having it *known* of me that I am a good master, not in having it *said* of me that I am a smooth author. My vanity is never more wounded than in being called a fine writer, meaning—that nobody need mind what I say.

3. Well, then, besides this vanity, I have some solicitude for your progress. You may give me credit for it or not, as you choose, but it is sincere. And that your advance may be safe, I have taken the best pains I could in laying down laws for it. In these three years I have got my grammar written, and, with the help of many friends, all working instruments in good order; and now we will try what we can do. Not that, even now, you are to depend on my presence with you in personal teaching. I shall henceforward think of the lectures less, of the schools more; but my best work for the schools will often be by drawing in Florence or in Lancashire—not here.

4. I have already told you several times that the course through which I mean every student in these schools should pass, is one which shall enable them to understand the elementary principles of the finest art. It will necessarily be severe, and seem to lead to no immediate result. Some of you will, on the contrary, wish to be taught what is immediately easy, and gives prospect of a manifest success.

But suppose they should come to the Professor of Logic and Rhetoric, and tell him they wanted to be taught to preach like Mr. Spurgeon, or the Bishop of —.

* Inaugural series, *Aratra Pentelici*, and *Eagle's Nest*.

He would say to them,—I cannot, and if I could I would not, tell you how to preach like Mr. Spurgeon, or the Bishop of ——. Your own character will form your style ; your own zeal will direct it ; your own obstinacy or ignorance may limit or exaggerate it ; but my business is to prevent, as far as I can, your having *any* particular style ; and to teach you the laws of all language, and the essential power of your own.

In like manner, this course, which I propose to you in art, will be calculated only to give you judgment and method in future study, to establish to your conviction the laws of general art, and to enable you to draw, if not with genius, at least with sense and propriety.

The course, so far as it consists in practice, will be defined in my Instructions for the schools. And the theory connected with that practice is set down in the three lectures at the end of the first course I delivered—those on Line, Light, and Colour.

You will have, therefore, to get this book,* and it is the only one which you will need to have of your own,—the others are placed, for reference, where they will be accessible to you.

5. In the 139th paragraph, p. 132, it states the order of your practical study in these terms :

“I wish you to begin by getting command of line ;—that is to say, by learning to draw a steady line, limiting with absolute correctness the form or space you intend it to limit ; to proceed by getting command over flat tints, so that you may be able to fill the spaces you have enclosed evenly, either with shade or colour, according to the school you adopt ; and, finally, to obtain the power of adding such fineness of drawing, within the masses, as shall express their undulation, and their characters of form and texture.”

And now, since in your course of practice you are first required to attain the power of drawing lines accurately and delicately, so in the course of theory, or grammar, I wish you

* My inaugural series of seven lectures, published at the Clarendon Press.

first to learn the principles of linear design, exemplified by the schools which at the top of page 130 you will find characterized as the Schools of Line.

6. If I had command of as much time as I should like to spend with you on this subject, I would begin with the early forms of art which used the simplest linear elements of design. But, for general service and interest, it will be better that I should sketch what has been accomplished by the greatest masters in that manner; the rather that their work is more or less accessible to all, and has developed into the vast industries of modern engraving, one of the most powerful existing influences of education and sources of pleasure among civilized people.

And this investigation, so far from interrupting, will facilitate our examination of the history of the nobler arts. You will see in the preface to my lectures on Greek sculpture that I intend them to be followed by a course on architecture, and that by one on Florentine sculpture. But the art of engraving is so manifestly, at Florence, though not less essentially elsewhere, a basis of style both in architecture and sculpture, that it is absolutely necessary I should explain to you in what the skill of the engraver consists, before I can define with accuracy that of more admired artists. For engraving, though not altogether in the method of which you see examples in the print-shops of the High Street, is, indeed, a prior art to that either of building or sculpture, and is an inseparable part of both, when they are rightly practised.

7. And while we thus examine the scope of this first of the arts, it will be necessary that we learn also the scope of mind of the early practisers of it, and accordingly acquaint ourselves with the main events in the biography of the schools of Florence. To understand the temper and meaning of one great master is to lay the best, if not the only, foundation for the understanding of all; and I shall therefore make it the leading aim of this course of lectures to remind you of what is known, and direct you to what is knowable, of the life and character of the greatest Florentine master of engraving, Sandro Botticelli; and, incidentally, to give you some idea of

the power of the greatest master of the German, or any northern, school, Hans Holbein.

8. You must feel, however, that I am using the word "engraving" in a somewhat different, and, you may imagine, a wider, sense, than that which you are accustomed to attach to it. So far from being a wider sense, it is in reality a more accurate and restricted one, while yet it embraces every conceivable right application of the art. And I wish, in this first lecture, to make entirely clear to you the proper meaning of the word, and proper range of the art of, engraving; in my next following lecture, to show you its place in Italian schools, and then, in due order, the place it ought to take in our own, and in all schools.

9. First then, to-day, of the *Differentia*, or essential quality of Engraving, as distinguished from other arts.

What answer would you make to me, if I asked casually what engraving was? Perhaps the readiest which would occur to you would be, "The translation of pictures into black and white by means admitting reduplication of impressions." But if that be done by lithography, we do not call it engraving,—whereas we speak contentedly and continually of seal engraving, in which there is no question of black and white. And, as scholars, you know that this customary mode of speaking is quite accurate; and that engraving means, primarily, making a permanent cut or furrow in something. The central syllable of the word has become a sorrowful one, meaning the most permanent of furrows.

10. But are you prepared absolutely to accept this limitation with respect to engraving as a pictorial art? Will you call nothing an engraving, except a group of furrows or cavities cut in a hard substance? What shall we say of *mezzotint* engraving, for instance, in which, though indeed furrows and cavities are produced mechanically as a ground, the artist's work is in effacing them? And when we consider the power of engraving in representing pictures and multiplying them, are we to recognize and admire no effects of light and shade except those which are visibly produced by dots or furrows? I mean, will the virtue of an engraving be in ex-

hibiting these imperfect means of its effect, or in concealing them?

11. Here, for instance, is the head of a soldier by Durer,—a mere gridiron of black lines. Would this be better or worse engraving if it were more like a photograph or lithograph, and no lines seen?—suppose, more like the head of Mr. Santley, now in all the music-shops, and really quite deceptive in light and shade, when seen from over the way? Do you think Durer's work would be better if it were more like that? And would you have me, therefore, leaving the question of technical method of production altogether to the craftsman, consider pictorial engraving simply as the production of a light-and-shade drawing, by some method permitting its multiplication for the public?

12. This, you observe, is a very practical question indeed. For instance, the illustrations of my own lectures on sculpture are equivalent to permanent photographs. There can be little doubt that means will be discovered of thus producing perfect facsimiles of artists' drawings; so that, if no more than facsimile be required, the old art of cutting furrows in metal may be considered as, at this day, virtually ended. And, indeed, it is said that line engravers cannot any more get apprentices, and that a pure steel or copper plate is not likely to be again produced, when once the old living masters of the bright field shall have been all laid in their earth-furrows.

13. Suppose, then, that this come to pass; and more than this, suppose that wood engraving also be superseded, and that instead of imperfect transcripts of drawings, on wood-blocks or metal-plates, photography enabled us to give, quite cheaply, and without limit to number facsimiles of the finished light-and-shade drawings of artists themselves. Another group of questions instantly offers itself, on these new conditions; namely, What are the best means for a light-and-shade drawing—the pen, or the pencil, the charcoal, or the flat wash? That is to say, the pen, producing shade by black lines, as old engraving did; the pencil, producing shade by grey lines, variable in force; the charcoal, producing a smoky shadow with no lines in it, or the washed tint, producing a

transparent shadow with no lines in it. Which of these methods is the best?—or have they, each and all, virtues to be separately studied, and distinctively applied?

14. See how curiously the questions multiply on us. 1st, Is engraving to be only considered as cut work? 2nd, For present designs multipliable without cutting, by the sunshine, what methods or instruments of drawing will be best? And now, 3rdly, before we can discuss these questions at all, is there not another lying at the root of both,—namely, what a light-and-shade drawing itself properly *is*, and how it differs, or should differ, from a painting,—whether by mere deficiency, or by some entirely distinct merit?

15. For instance, you know how confidently it is said, in common talk about Turner, that his works are intelligible and beautiful when engraved, though incomprehensible as paintings. Admitting this to be so, do you suppose it is because the translation into light and shade is deficient in some qualities which the painting had, or that it possesses some quality which the painting had not? Does it please more because it is deficient in the colour which confused a feeble spectator, and offended a dogmatic one,—or because it possesses a decision in its steady linear labour which interprets, or corrects, the swift pencilling of the artist?

16. Do you notice the two words I have just used, *Decision*, and *Linear*?—*Decision*, again introducing the idea of cuts or divisions, as opposed to gradations; *Linear*, as opposed to massive or broad?

Yet we use all these words at different times in praise, while they evidently mark inconsistent qualities. Softness and decision, breadth and delineation, cannot co-exist in equal degrees. There must surely therefore be a virtue in the engraving inconsistent with that of the painting, and vice versa.

Now, be clear about these three questions which we have to-day to answer.

A. Is all engraving to be cut work?

B. If it need not be cut work, but only the reproduction of a drawing, what methods of executing a light-and-shade drawing will be best?

C. Is the shaded drawing itself to be considered only as a deficient or imperfect painting, or as a different thing from a painting, having a virtue of its own, belonging to black and white, as opposed to colour?

17. I will give you the answers at once, briefly, and amplify them afterwards.

A. All engraving must be cut work ;—*that* is its differentia. Unless your effect be produced by cutting into some solid substance, it is not engraving at all.

B. The proper methods for light-and-shade drawing vary according to subject, and the degree of completeness desired,—some of them having much in common with engraving, and others with painting.

C. The qualities of a light-and-shade drawing ought to be entirely different from those of a painting. It is not a deficient or partial representation of a coloured scene or picture, but an entirely different reading of either. So that much of what is intelligible in a painting ought to be unintelligible in a light-and-shade study and vice versâ.

You have thus three arts,—engraving, light-and-shade drawing, and painting.

Now I am not going to lecture, in this course, on painting, nor on light-and-shade drawing, but on engraving only. But I must tell you something about light-and-shade drawing first ; or, at least, remind you of what I have before told.

18. You see that the three elementary lectures in my first volume are on Line, Light, and Colour,—that is to say, on the modes of art which produce linear designs,—which produce effects of light,—and which produce effects of colour.

I must, for the sake of new students, briefly repeat the explanation of these.

Here is an Arabian vase, in which the pleasure given to the eye is only by lines ;—no effect of light, or of colour, is attempted. Here is a moonlight by Turner, in which there are no lines at all, and no colours at all. The pleasure given to the eye is only by modes of light and shade, or effects of light. Finally, here is an early Florentine painting, in which there are

no lines of importance, and no effect of light whatever ; but all the pleasure given to the eye is in gaiety and variety of colour.

19. I say, the pleasure given to the *eye*. The lines on this vase write something ; but the ornamentation produced by the beautiful writing is independent of its meaning. So the moonlight is pleasant, first, as light ; and the figures, first, as colour. It is not the shape of the waves, but the light on them ; not the expression of the figures, but their colour, by which the *ocular* pleasure is to be given.

These three examples are violently marked ones ; but, in preparing to draw *any* object, you will find that, practically, you have to ask yourself, Shall I aim at the colour of it, the light of it, or the lines of it ? You can't have all three ; you can't even have any two out of the three in equal strength. The best art, indeed, comes so near nature as in a measure to unite all. But the best is not, and cannot be, as good as nature ; and the mode of its deficiency is that it must lose some of the colour, some of the light, or some of the delineation. And in consequence, there is one great school which says, We will have the colour, and as much light and delineation as are consistent with it. Another which says, We will have shade, and as much colour and delineation as are consistent with it. The third, We will have delineation, and as much colour and shade as are consistent with it.

20. And though much of the two subordinate qualities may in each school be consistent with the leading one, yet the schools are evermore separate : as, for instance, in other matters, one man says, I will have my fee, and as much honesty as is consistent with it ; another, I will have my honesty, and as much fee as is consistent with it. Though the man who will have his fee be subordinately honest,—though the man who will have his honour, subordinately rich, are they not evermore of diverse schools ?

So you have, in art, the utterly separate provinces, though in contact at their borders, of

The Delineators ;

The Chiaroscurists ; and

The Colourists.

21. The Delineators are the men on whom I am going to give you this course of lectures. They are essentially engravers, an engraved line being the best means of delineation. The Chiaroscurists are essentially draughtsmen with chalk, charcoal, or single tints. Many of them paint, but always with some effort and pain. Leonardo is the type of them; but the entire Dutch school consists of them, laboriously painting, without essential genius for colour.

The Colourists are the true painters; and all the faultless (as far, that is to say, as men's work can be so,) and consummate masters of art belong to them.

22. The distinction between the colourist and chiaroscurist school is trenchant and absolute; and may soon be shown you so that you will never forget it. Here is a Florentine picture by one of the pupils of Giotto, of very good representative quality, and which the University galleries are rich in possessing. At the distance at which I hold it, you see nothing but a chequer-work of brilliant, and, as it happens, even glaring colours. If you come near, you will find this patchwork resolve itself into a Visitation, and Birth of St. John; but that St. Elizabeth's red dress, and the Virgin's blue and white one, and the brown posts of the door, and the blue spaces of the sky, are painted in their own entirely pure colours, each shaded with more powerful tints of itself,—pale blue with deep blue, scarlet with crimson, yellow with orange, and green with richer green.

The whole is therefore as much a mosaic work of brilliant colour as if it were made of bits of glass. There is no effect of light attempted, or so much as thought of: you don't know even where the sun is; nor have you the least notion what time of day it is. The painter thinks you cannot be so superfluous as to want to know what time of day it is.

23. Here, on the other hand, is a Dutch picture of good average quality, also out of the University galleries. It represents a group of cattle, and a herdsman watching them. And you see in an instant that the time is evening. The sun is setting, and there is warm light on the landscape, the cattle, and the standing figure.

Nor does the picture in any conspicuous way seem devoid of colour. On the contrary, the herdsman has a scarlet jacket, which comes out rather brilliantly from the mass of shade round it; and a person devoid of colour faculty, or ill taught, might imagine the picture to be really a fine work of colour.

But if you will come up close to it, you will find that the herdsman has brown sleeves, though he has a scarlet jacket; and that the shadows of both are painted with precisely the same brown, and in several places with continuous touches of the pencil. It is only in the light that the scarlet is laid on.

This at once marks the picture as belonging to the lower or chiaroscurist school, even if you had not before recognized it as such by its pretty rendering of sunset effect.

24. You might at first think it a painting which showed greater skill than that of the school of Giotto. But the skill is not the primary question. The power of imagination is the first thing to be asked about. This Italian work imagines, and requires you to imagine also, a St. Elizabeth and St. Mary, to the best of your power. But this Dutch one only wishes you to imagine an effect of sunlight on cowskin, which is a far lower strain of the imaginative faculty.

Also, as you may see the effect of sunlight on cowskin, in reality, any summer afternoon, but cannot so frequently see a St. Elizabeth, it is a far less useful strain of the imaginative faculty.

And, generally speaking, the Dutch chiaroscurists are indeed persons without imagination at all,—who, not being able to get any pleasure out of their thoughts, try to get it out of their sensations; note, however, also their technical connection with the Greek school of shade, (see my sixth inaugural lecture, p. 158,) in which colour was refused, not for the sake of deception, but of solemnity.

25. With these final motives you are not now concerned; your present business is the quite easy one of knowing, and noticing, the universal distinction between the methods of treatment in which the aim is light, and in which it is colour; and so to keep yourselves guarded from the danger of being misled by the, often very ingenious, talk of persons who have

vivid colour sensations without having learned to distinguish them from what else pleases them in pictures. There is an interesting volume by Professor Taine on the Dutch school, containing a valuable historical analysis of the influences which formed it ; but full of the gravest errors, resulting from the confusion in his mind between colour and tone, in consequence of which he imagines the Dutch painters to be colourists.

26. It is so important for you to be grounded securely in these first elements of pictorial treatment, that I will be so far tedious as to show you one more instance of the relative intellectual value of the pure colour and pure chiaroscuro school, not in Dutch and Florentine, but in English art. Here is a copy of one of the lost frescoes of our Painted Chamber of Westminster ;—fourteenth-century work, entirely conceived in colour, and calculated for decorative effect. There is no more light and shade in it than in a Queen of Hearts in a pack of cards ; all that the painter at first wants you to see is that the young lady has a white forehead, and a golden crown, and a fair neck, and a violet robe, and a crimson shield with golden leopards on it ; and that behind her is a clear blue sky. Then, farther, he wants you to read her name, “Debonnairete,” which, when you have read, he farther expects you to consider what it is to be debonnaire, and to remember your Chaucer’s description of the virtue :—

She was not brown, nor dun of hue,
But white as snowe, fallen new,
With eyen glad, and browes bent,
Her hair down to her heeles went,
And she was simple, as dove on tree,
Full debonnair of heart was she.

27. You see Chaucer dwells on the color just as much as the painter does, but the painter has also given her the English shield to bear, meaning that good-humour, or debonnair-ete, cannot be maintained by self-indulgence ;—only by fortitude. Farther note, with Chaucer, the “eyen glad,” and brows “bent” (high-arched and calm), the strong life (hair down to

the heels,) and that her gladness is to be without subtlety,—that is to say, without the slightest pleasure in any form of advantage-taking, or any shrewd or mocking wit: “she was simple as dove on tree;” and you will find that the colour-painting, both in the fresco and in the poem, is in the very highest degree didactic and intellectual; and distinguished, as being so, from all inferior forms of art. Farther, that it requires you yourself first to understand the nature of simplicity, and to like simplicity in young ladies better than subtlety; and to understand why the second of Love’s five kind arrows (*Beauté* being the first),

Simplece ot nom, la seconde
Qui maint homme parmi le monde
Et mainte dame fait amer.

Nor must you leave the picture without observing that there is another reason for *Debonnairete*’s bearing the Royal shield,—of all shields that, rather than another. “*De-bonne-aire*” meant originally “out of a good eagle’s nest,” the “*aire*” signifying the eagle’s nest or eyrie especially, because it is flat, the Latin “*area*” being the root of all.

And this coming out of a good nest is recognized as, of all things, needfullest to give the strength which enables people to be good-humoured; and thus you have “*debonnaire*” forming the third word of the group, with “gentle” and “kind,” all first signifying “of good race.”

You will gradually see, as we go on, more and more why I called my third volume of lectures *Eagle’s Nest*; for I am not fantastic in these titles, as is often said; but try shortly to mark my chief purpose in the book by them.

28. Now for comparison with this old art, here is a modern engraving, in which colour is entirely ignored; and light and shade alone are used to produce what is supposed to be a piece of impressive religious instruction. But it is not a piece of religious instruction at all;—only a piece of religious sensation, prepared for the sentimental pleasure of young ladies; whom (since I am honoured to-day by the presence of many) I will take the opportunity of warning against such

forms of false theological satisfaction. This engraving represents a young lady in a very long and, though plain, very becoming white dress, tossed upon the waves of a terrifically stormy sea, by which neither her hair nor her becoming dress is in the least wetted ; and saved from despair in that situation by closely embracing a very thick and solid stone Cross. By which far-sought and original metaphor young ladies are expected, after some effort, to understand the recourse they may have, for support, to the Cross of Christ, in the midst of the troubles of this world.

29. As those troubles are for the present, in all probability, limited to the occasional loss of their thimbles when they have not taken care to put them into their workboxes,—the concern they feel at the unsympathizing gaiety of their companions,—or perhaps the disappointment at not hearing a favourite clergyman preach,—(for I will not suppose the young ladies interested in this picture to be affected by any chagrin at the loss of an invitation to a ball, or the like worldliness,)—it seems to me the stress of such calamities might be represented, in a picture, by less appalling imagery. And I can assure my fair little lady friends,—if I still have any,—that whatever a young girl's ordinary troubles or annoyances may be, her true virtue is in shaking them off, as a rose-leaf shakes off rain, and remaining debonnaire and bright in spirits, or even, as the rose would be, the brighter for the troubles ; and not at all in allowing herself to be either drifted or depressed to the point of requiring religious consolation. But if any real and deep sorrow, such as no metaphor can represent, fall upon her, does she suppose that the theological advice of this piece of modern art can be trusted ? If she will take the pains to think truly, she will remember that Christ Himself never says anything about holding by His Cross. He speaks a good deal of bearing it ; but never for an instant of holding by it. It is His Hand, not His Cross, which is to save either you, or St. Peter, when the waves are rough. And the utterly reckless way in which modern religious teachers, whether in art or literature, abuse the metaphor somewhat briefly and violently leant on by St. Paul, simply prevents your understanding the

meaning of any word which Christ Himself speaks on this matter! So you see this popular art of light and shade, catching you by your mere thirst of sensation, is not only undidactic, but the reverse of didactic—deceptive and illusory.

30. This *popular* art, you hear me say, scornfully; and I have told you, in some of my teaching in Aratra Pentelici, that all great art must be popular. Yes, but great art is popular, as bread and water are to children fed by a father. And vile art is popular, as poisonous jelly is, to children cheated by a confectioner. And it is quite possible to make any kind of art popular on those last terms. The colour school may become just as poisonous as the colourless, in the hands of fools, or of rogues. Here is a book I bought only the other day,—one of the things got up cheap to catch the eyes of mothers at bookstalls,—Puss in Boots, illustrated; a most definite work of the colour school—red jackets and white paws and yellow coaches as distinct as Giotto or Raphael would have kept them. But the thing is done by fools for money, and becomes entirely monstrous and abominable. Here, again, is colour art produced by fools for religion: here is Indian sacred painting,—a black god with a hundred arms, with a green god on one side of him and a red god on the other; still a most definite work of the colour school. Giotto or Raphael could not have made the black more resolutely black, (though the whole colour of the school of Athens is kept in distinct separation from one black square in it), nor the green more unquestionably green. Yet the whole is pestilent and loathsome.

31. Now but one point more, and I have done with this subject for to-day.

You must not think that this manifest brilliancy and Harlequin's-jacket character is essential in the colour school. The essential matter is only that everything should be of *its own* definite colour: it may be altogether sober and dark, yet the distinctness of hue preserved with entire fidelity. Here, for instance, is a picture of Hogarth's,—one of quite the most precious things we have in our galleries. It represents a meeting of some learned society—gentlemen of the last century, very gravely dressed, but who, nevertheless, as gentlemen

pleasantly did in that day,—you remember Goldsmith's weakness on the point—wear coats of tints of dark red, blue, or violet. There are some thirty gentlemen in the room, and perhaps seven or eight different tints of subdued claret-colour in their coats; and yet every coat is kept so distinctly of its own proper claret-colour, that each gentleman's servant would know his master's.

Yet the whole canvas is so grey and quiet, that as I now hold it by this Dutch landscape, with the vermilion jacket, you would fancy Hogarth's had no colour in it at all, and that the Dutchman was half-way to becoming a Titian; whereas Hogarth's is a consummate piece of the most perfect colourist school, which Titian could not beat, in its way; and the Dutchman could no more paint half an inch of it than he could summon a rainbow into the clouds.

32. Here then, you see, are, altogether, five works, all of the absolutely pure colour school:—

1. One, Indian,—Religious Art;
2. One, Florentine,—Religious Art;
3. One, English, from Painted Chamber, Westminster,—Ethic Art;
4. One, English,—Hogarth,—Naturalistic Art;
5. One, English,—to-day sold in the High Street,—Caricaturist Art.

And of these, the Florentine and old English are divine work, God-inspired; full, indeed, of faults and innocencies, but divine, as good children are.

Then this by Hogarth is entirely wise and right; but worldly-wise, not divine.

While the old Indian, and this, with which we feed our children at this hour, are entirely damnable art;—every bit of it done by the direct inspiration of the devil,—feeble, ridiculous,—yet mortally poisonous to every noble quality in body and soul.

33. I have now, I hope, guarded you sufficiently from the danger either of confusing the inferior school of chiaroscuro with that of colour, or of imagining that a work must necessarily be good, on the sole ground of its belonging to the

higher group. I can now proceed securely to separate the third school, that of Delineation, from both ; and to examine its special qualities.

It begins, (see Inaugural Lectures, § 137,) in the primitive work of races insensible alike to shade and to colour, and nearly devoid of thought and of sentiment, but gradually developing into both.

Now as the design is primitive, so are the means likely to be primitive. A line is the simplest work of art you can produce. What are the simplest means you can produce it with?

A Cumberland lead pencil is a work of art in itself, quite a nineteenth-century machine. Pen and ink are complex and scholarly ; and even chalk or charcoal not always handy.

But the primitive line, the first and last, generally the best of lines, is that which you have elementary faculty of at your fingers' ends, and which kittens can draw as well as you—the scratch.

The first, I say, and the last of lines. Permanent exceedingly,—even in flesh, or on mahogany tables, often more permanent than we desire. But when studiously and honourably made, divinely permanent, or delightfully—as on the venerable desks of our public schools, most of them, now, specimens of wood engraving dear to the heart of England.

34. Engraving, then, is in brief terms, the Art of Scratch. It is essentially the cutting into a solid substance for the sake of making your ideas as permanent as possible,—graven with an iron pen in the Rock for ever. *Permanence*, you observe, is the object, not multiplicability ;—that is quite an accidental, sometimes not even a desirable, attribute of engraving. Duration of your work—fame, and the undeceived vision of all men, on the pane of glass of the window on a wet day, or on the pillars of the castle of Chillon, or on the walls of the pyramids ;—a primitive art,—yet first and last with us.

Since then engraving, we say, is essentially cutting into the surface of any solid ; as the primitive design is in lines or dots, the primitive cutting of such design is a scratch or a hole ; and scratchable solids being essentially three—stone,

wood, metal,—we shall have three great schools of engraving to investigate in each material.

35. On tablet of stone, on tablet of wood, on tablet of steel,—the first giving the law to everything; the second true Athenian, like Athena's first statue in olive-wood, making the law legible and homely; and the third true Vulcanian, having the splendour and power of accomplished labour.

Now of stone engraving, which is joined inseparably with sculpture and architecture, I am not going to speak at length in this course of lectures. I shall speak only of wood and metal engraving. But there is one circumstance in stone engraving which it is necessary to observe in connection with the other two branches of the art.

The great difficulty for a primitive engraver is to make his scratch deep enough to be visible. Visibility is quite as essential to your fame as permanence; and if you have only your furrow to depend on, the engraved tablet, at certain times of day, will be illegible, and passed without notice.

But suppose you fill in your furrow with something black, then it will be legible enough at once; and if the black fall out or wash out, still your furrow is there, and may be filled again by anybody.

Therefore, the noble stone engravers, using marble to receive their furrow, fill that furrow with marble ink.

And you have an engraved plate to purpose;—with the whole sky for its margin! Look here—the front of the church of San Michele of Lucca,—white marble with green serpentine for ink; or here,—the steps of the Giant's Stair, with lead for ink; or here,—the floor of the Pisan Duomo, with porphyry for ink. Such cutting, filled in with colour or with black, branches into all sorts of developments,—Florentine mosaic on the one hand, niello on the other, and infinite minor arts.

36. Yet we must not make this filling with colour part of our definition of engraving. To engrave is, in final strictness, “to decorate a surface with furrows.” (Cameos, in accuratest terms, are minute sculptures, not engravings.) A ploughed

field is the purest type of such art ; and is, on hilly land, an exquisite piece of decoration.

Therefore it will follow that engraving distinguishes itself from ordinary drawing by greater need of muscular effort.

The quality of a pen drawing is to be produced easily,—deliberately, always,* but with a point that *glides* over the paper. Engraving, on the contrary, requires always force, and its virtue is that of a line produced by pressure, or by blows of a chisel.

It involves, therefore, always, ideas of power and dexterity, but also of restraint ; and the delight you take in it should involve the understanding of the difficulty the workman dealt with. You perhaps doubt the extent to which this feeling justly extends, (in the first volume of “Modern Painters,” expressed under the head “Ideas of Power.”) But why is a large stone in any building grander than a small one ? Simply because it was more difficult to raise it. So, also, an engraved line is, and ought to be, recognized as more grand than a pen or pencil line, because it was more difficult to execute it.

In this mosaic of Lucca front you forgive much, and admire much, because you see it is all cut in stone. So, in wood and steel, you ought to see that every line has been costly ; but observe, costly of deliberative, no less than athletic or executive power. The main use of the restraint which makes the line difficult to draw, is to give time and motive for deliberation in drawing it, and to ensure its being the best in your power.

37. For, as with deliberation, so without repentance, your engraved line must be. It may, indeed, be burnished or beaten out again in metal, or patched and botched in stone ; but always to disadvantage, and at pains which must not be incurred often. And there is a singular evidence in one of Durer’s finest plates that, in his time, or at least in his manner of work, it was not possible at all. Among the disputes as to the meaning of Durer’s Knight and Death, you will find it sometimes suggested, or insisted, that the horse’s raised foot

* Compare Inaugural Lectures, § 144.

is going to fall into a snare. What has been fancied a noose is only the former outline of the horse's foot and limb, unefaced.

The engraved line is therefore to be conclusive; not experimental. "I have determined this," says the engraver. Much excellent pen drawing is excellent in being tentative,—in being experimental. Indeterminate, not through want of meaning, but through fulness of it—halting *wisely* between two opinions—feeling cautiously after clearer opinions. But your engraver has made up his opinion. This is so, and must for ever be so, he tells you. A very proper thing for a thoughtful man to say; a very improper and impertinent thing for a foolish one to say. Foolish engraving is consummately foolish work. Look—all the world,—look for evermore, says the foolish engraver; see what a fool I have been. How many lines I have laid for nothing. How many lines upon lines, with no precept, much less superprecept.

38. Here, then, are two definite ethical characters in all engraved work. It is Athletic; and it is Resolute. Add one more; that it is Obedient;—in their infancy the nurse, but in their youth the slave, of the higher arts; servile, both in the mechanism and labour of it, and in its function of interpreting the schools of painting as superior to itself.

And this relation to the higher arts we will study at the source of chief power in all the normal skill of Christendom, Florence; and chiefly, as I said, in the work of one Florentine master, Sandro Botticelli.

LECTURE II.

THE RELATION OF ENGRAVING TO OTHER ARTS IN FLORENCE.

39. FROM what was laid before you in my last lecture, you must now be aware that I do not mean, by the word 'engraving,' merely the separate art of producing plates from which black pictures may be printed.

I mean, by engraving, the art of producing decoration on a surface by the touches of a chisel or a burin; and I mean by

its relation to other arts, the subordinate surface of this linear work, in sculpture, in metal work, and in painting; or in the representation and repetition of painting.

And first, therefore, I have to map out the broad relations of the arts of sculpture, metal work, and painting, in Florence, among themselves, during the period in which the art of engraving was distinctly connected with them.*

40. You will find, or may remember, that in my lecture on Michael Angelo and Tintoret I indicated the singular importance, in the history of art, of a space of forty years, between 1480, and the year in which Raphael died, 1520. Within that space of time the change was completed, from the principles of ancient, to those of existing, art;—a manifold change, not definable in brief terms, but most clearly characterized, and easily remembered, as the change of conscientious and didactic art, into that which proposes to itself no duty beyond technical skill, and no object but the pleasure of the beholder. Of that momentous change itself I do not purpose to speak in the present course of lectures; but my endeavour will be to lay before you a rough chart of the course of the arts in Florence up to the time when it took place; a chart indicating for you, definitely, the growth of conscience, in work which is distinctively conscientious, and the perfecting of expression and means of popular address, in that which is distinctively didactic.

41. Means of popular address, observe, which have become singularly important to us at this day. Nevertheless, remember that the power of printing, or reprinting, black *pictures*,—practically contemporary with that of reprinting black *letters*,—modified the art of the draughtsman only as it modified that of the scribe. Beautiful and unique writing, as beautiful and unique painting or engraving, remain exactly what they were; but other useful and reproductive methods of both have been superadded. Of these, it is acutely said by Dr. Alfred Woltmann,†—

* Compare Aratra Pentelici, § 154.

† "Holbein and His Time," 4to, Bentley, 1872, (a very valuable book,) p. 17. Italics mine.

"A far more important part is played in the art-life of Germany by the technical arts for the *multiplying* of works ; for Germany, while it was the land of book-printing, is also the land of picture-printing. Indeed, wood-engraving, which preceded the invention of book-printing, *prepared the way for it, and only left one step more necessary for it.* Book-printing and picture-printing have both the same inner cause for their origin, namely, the impulse to make each mental gain a common blessing. Not merely princes and rich nobles were to have the privilege of adorning their private chapels and apartments with beautiful religious pictures ; the poorest man was also to have his delight in that which the artist had devised and produced. It was not sufficient for him when it stood in the church as an altar-shrine, visible to him and to the congregation from afar ; he desired to have it as his own, to carry it about with him, to bring it into his own home. The grand importance of wood-engraving and copperplate is not sufficiently estimated in historical investigations. They were not alone of use in the advance of art ; they form an epoch in the entire life of mind and culture. The idea embodied and multiplied in pictures became like that embodied in the printed word, the herald of every intellectual movement, and conquered the world."

42. "Conquered the world"? The rest of the sentence is true, but this, hyperbolic, and greatly false. It should have been said that both painting and engraving have conquered much of the good in the world, and, hitherto, little or none of the evil.

Nor do I hold it usually an advantage to art, in teaching, that it *should* be common, or constantly seen. In becoming intelligibly and kindly beautiful, while it remains solitary and unrivalled, it has a greater power. Westminster Abbey is more didactic to the English nation, than a million of popular illustrated treatises on architecture.

Nay, even that it cannot be understood but with some difficulty, and must be sought before it can be seen, is no harm. The noblest didactic art is, as it were, set on a hill, and its disciples come to it. The vilest destructive and corrosive art stands at the street corners, crying, "Turn in hither ; come, eat of my bread, and drink of my wine, which I have mingled."

And Dr. Woltmann has allowed himself too easily to fall into the common notion of Liberalism, that bad art, disseminated, is instructive, and good art isolated, not so. The question is, first, I assure you, whether what art you have got is good or bad. If essentially bad, the more you see of it, the worse for you. Entirely popular art is all that is noble, in the cathedral, the council chamber, and the market-place ; not the paltry coloured print pinned on the wall of a private room.

43. I despise the poor!—do I, think you? Not so. They only despise the poor who think them better off with police news, and coloured tracts of the story of Joseph and Potiphar's wife, than they were with Luini painting on their church walls, and Donatello carving the pillars of their Market-places.

Nevertheless, the effort to be universally, instead of locally, didactic, modified advantageously, as you know, and in a thousand ways varied, the earlier art of engraving : and the development of its popular power, whether for good or evil, came exactly—so fate appointed—at a time when the minds of the masses were agitated by the struggle which closed in the Reformation in some countries, and in the desperate refusal of Reformation in others.* The two greatest masters of engraving whose lives we are to study, were, both of them, passionate reformers : Holbein no less than Luther ; Botticelli no less than Savonarola.

44. Reformers, I mean, in the full and, accurately, the only, sense. Not preachers of new doctrines ; but witnesses against the betrayal of the old ones which were on the lips of all men, and in the lives of none. Nay, the painters are indeed more pure reformers than the priests. They rebuked the manifest vices of men, while they realized whatever was loveliest in their faith. Priestly reform soon enraged itself into mere contest for personal opinions ; while, without rage, but in stern rebuke of all that was vile in conduct or thought,—in declaration of the always-received faiths of the Christian

* See Carlyle, *Frederick*, Book III., chap. viii.

Church, and in warning of the power of faith, and death,* over the petty designs of men,—Botticelli and Holbein together fought foremost in the ranks of the reformation.

45. To-day I will endeavour to explain how they attained such rank. Then, in the next two lectures, the technics of both,—their way of speaking ; and in the last two, what they had got to say.

First, then, we ask how they attained this rank ;—who taught *them* what they were finally best to teach ? How far must every people—how far did this Florentine people—teach its masters, before *they* could teach *it* ?

Even in these days, when every man is, by hypothesis, as good as another, does not the question sound strange to you ? You recognize in the past, as you think, clearly, that national advance takes place always under the guidance of masters, or groups of masters, possessed of what appears to be some new personal sensibility or gift of invention ; and we are apt to be reverent to these alone, as if the nation itself had been unprogressive, and suddenly awakened, or converted, by the genius of one man.

No idea can be more superficial. Every nation must teach its tutors, and prepare itself to receive them ; but the fact on which our impression is founded—the rising, apparently by chance, of men whose singular gifts suddenly melt the multitude, already at the point of fusion ; or suddenly form, and *inform*, the multitude which has gained coherence enough to be capable of formation,—enables us to measure and map the gain of national intellectual territory, by tracing first the lifting of the mountain chains of its genius.

46. I have told you that we have nothing to do at present with the great transition from ancient to modern habits of thought which took place at the beginning of the sixteenth century. I only want to go as far as that point ;—where we

* I believe I am taking too much trouble in writing these lectures. This sentence, § 44, has cost me, I suppose, first and last, about as many hours as there are lines in it ;—and my choice of these two words, faith and death, as representatives of power, will perhaps, after all, only puzzle the reader.

shall find the old superstitious art represented *finally* by Perugino, and the modern scientific and anatomical art represented *primarily* by Michael Angelo. And the epithet bestowed on Perugino by Michael Angelo, 'goffo nell' arte,' dunce, or blockhead, in art,—being, as far as my knowledge of history extends, the most cruel, the most false, and the most foolish insult ever offered by one great man to another,—does you at least good service, in showing how trenchant the separation is between the two orders of artists,*—how exclusively we may follow out the history of all the 'goffi nell' arte,' and write our Florentine Dunciad, and Laus Stultitiæ, in peace; and never trench upon the thoughts or ways of these proud ones, who showed their fathers' nakedness, and snatched their masters' fame.

47. The Florentine dunces in art are a multitude; but I only want you to know something about twenty of them.

Twenty!—you think that a grievous number? It may, perhaps, appease you a little to be told that when you really have learned a very little, accurately, about these twenty dunces, there are only five more men among the artists of Christendom whose works I shall ask you to examine while you are under my care. That makes twenty-five altogether,—an exorbitant demand on your attention, you still think? And yet, but a little while ago, you were all agog to get me to go and look at Mrs. A's sketches, and tell you what was to be thought about *them*; and I've had the greatest difficulty to keep Mrs. B's photographs from being shown side by side with the Raphael drawings in the University galleries. And you will waste any quantity of time in looking at Mrs. A's sketches or Mrs. B's photographs; and yet you look grave, because, out of nineteen centuries of European art-labour and thought, I ask you to learn something seriously about the works of five-and-twenty men!

48. It is hard upon you, doubtless, considering the quan-

* He is said by Vasari to have called Francia the like. Francia is a child compared to Perugino; but a finished working-goldsmith and ornamental painter nevertheless; and one of the very last men to be called 'go.fo,' except by unparalleled insolence.

tity of time you must nowadays spend in trying which can hit balls farthest. So I will put the task into the simplest form I can.

Here are the names of the twenty-five men,* and opposite each, a line indicating the length of his life, and the position of it in his century. The diagram still, however, needs a few words of explanation. Very chiefly, for those who know anything of my writings, there is needed explanation of its not including the names of Titian, Reynolds, Velasquez, Turner, and other such men, always reverently put before you at other times.

They are absent, because I have no fear of your not looking at these. All your lives through, if you care about art, you will be looking at them. But while you are here at Oxford, I want to make you learn what you should know of these earlier, many of them weaker, men, who yet, for the very reason of their greater simplicity of power, are better guides for you, and of whom some will remain guides to all generations. And, as regards the subject of our present course, I have a still more weighty reason;—Vandyke, Gainsborough, Titian, Reynolds, Velasquez, and the rest, are essentially portrait painters. They give you the likeness of a man: they have nothing to say either about his future life, or his gods. ‘That is the look of him,’ they say: ‘here, on earth, we know no more.’

49. But these, whose names I have engraved, have something to say—generally much,—either about the future life of man, or about his gods. They are therefore, literally, seers or prophets. False prophets, it may be, or foolish ones; of that you must judge; but you must read before you can judge; and read (or hear) them consistently; for you don’t know them till you have heard them out. But with Sir Joshua, or Titian, one portrait is as another: it is here a pretty lady, there a great lord; but speechless, all;—whereas, with these twenty-five men, each picture or statue is not

* The diagram used at the lecture is engraved on the opposite leaf; the reader had better draw it larger for himself, as it had to be made inconveniently small for this size of leaf.

merely another person of a pleasant society, but another chapter of a Sibylline book.

50. For this reason, then, I do not want Sir Joshua or Velasquez in my defined group ; and for my present purpose, I can spare from it even four others :—namely, three who have *too* special gifts, and must each be separately studied—Correggio, Carpaccio, Tintoret ;—and one who has no special gift, but a balanced group of many—Cima. This leaves twenty-one for classification, of whom I will ask you to lay hold thus. You must continually have felt the difficulty caused by the names of centuries not tallying with their years ;—the year 1201 being the first of the 13th century, and so on. I am always plagued by it myself, much as I have to think and write with reference to chronology ; and I mean for the future, in our art chronology, to use as far as possible a different form of notation.

51. In my diagram the vertical lines are the divisions of tens of years ; the thick black lines divide the centuries. The horizontal lines, then, at a glance, tell you the length and date of each artist's life. In one or two instances I cannot find the date of birth ; in one or two more, of death ; and the line indicates then only the ascertained* period during which the artist worked.

And, thus represented, you see nearly all their lives run through the year of a new century ; so that if the lines representing them were needles, and the black bars of the years 1300, 1400, 1500 were magnets, I could take up nearly all the needles by lifting the bars.

52. I will actually do this, then, in three other simple diagrams. I place a rod for the year 1300 over the lines of life, and I take up all it touches. I have to drop Niccola Pisano, but I catch five. Now, with my rod of 1400, I have dropped Orcagna indeed, but I again catch five. Now, with my rod of 1500, I indeed drop Filippo Lippi and Verrocchio, but I catch seven. And here I have three pennons, with the staves of the

* 'Ascertained,' scarcely any date ever is, quite satisfactorily. The diagram only represents what is practically and broadly true. I may have to modify it greatly in detail.

years 1300, 1400, and 1500 running through them,—holding the names of nearly all the men I want you to study in easily remembered groups of five, five, and seven. And these three groups I shall hereafter call the 1300 group, 1400 group, and 1500 group.

53. But why should four unfortunate masters be dropped out?

Well, I want to drop them out, at any rate ; but not in disrespect. In hope, on the contrary, to make you remember them very separately indeed ;—for this following reason.

We are in the careless habit of speaking of men who form a great number of pupils, and have a host of inferior satellites round them, as masters of great schools.

But before you call a man a master, you should ask, Are his pupils greater or less than himself? If they are greater than himself, he is a master indeed ;—he has been a true teacher. But if all his pupils are less than himself, he may have been a great *man*, but in all probability has been a bad *master*, or no master.

Now these men, whom I have signally left out of my groups, are true *Masters*.

Niccola Pisano taught all Italy ; but chiefly his own son, who succeeded, and in some things very much surpassed him.

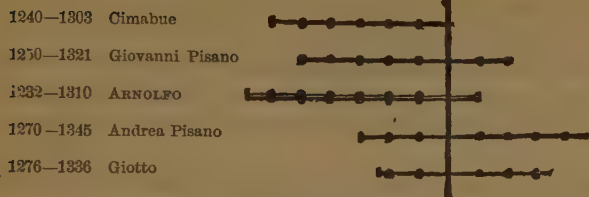
Orcagna taught all Italy, after him, down to Michael Angelo. And these two—Lippi, the religious schools, Verrocchio, the artist schools, of their century.

Lippi taught Sandro Botticelli ; and Verrocchio taught Leonardo da Vinci, Lorenzo di Credi, and Perugino. Have I not good reason to separate the masters of such pupils from the schools they created?

54. But how is it that I can drop just the cards I want out of my pack?

Well certainly I force and fit matters a little : I leave some men out of my list whom I should like to have in it ;—Benozzo, Gozzoli, for instance, and Mino da Fiesole ; but I can do without them, and so can you also, for the present. I catch Luca by a hair's-breadth only, with my 1400 rod ; but

1300.



1400.



1500.



on the whole, with very little coaxing, I get the groups in this memorable and quite literally 'handy' form. For see, I write my list of five, five, and seven, on bits of pasteboard ; I hinge my rods to these ; and you can brandish the school of 1400 in your left hand, and of 1500 in your right, like—railway signals ;—and I wish all railway signals were as clear. Once learn, thoroughly, the groups in this artificially contracted form, and you can refine and complete afterwards at your leisure.

55. And thus actually flourishing my two pennons, and getting my grip of the men, in either hand, I find a notable thing concerning my two flags. The men whose names I hold in my left hand are all sculptors ; the men whose names I hold in my right are all painters.

You will infallibly suspect me of having chosen them thus on purpose. No, honour bright !—I chose simply the greatest men,—those I wanted to talk to you about. I arranged them by their dates ; I put them into three conclusive pennons ; and behold what follows !

56. Farther, note this : in the 1300 group, four out of the five men are architects as well as sculptors and painters. In the 1400 group, there is one architect ; in the 1500, none. And the meaning of that is, that in 1300 the arts were all united, and duly led by architecture ; in 1400, sculpture began to assume too separate a power to herself ; in 1500, painting arrogated all, and, at last, betrayed all. From which, with much other collateral evidence, you may justly conclude that the three arts ought to be practised together, and that they naturally are so. I long since asserted that no man could be an architect who was not a sculptor. As I learned more and more of my business, I perceived also that no man could be a sculptor who was not an architect ;—that is to say, who had not knowledge enough, and pleasure enough in structural law, to be able to build, on occasion, better than a mere builder. And so, finally, I now positively aver to you that nobody, in the graphic arts, can be quite rightly a master of anything, who is not master of everything !

57. The junction of the three arts in men's minds, at the

best times, is shortly signified in these words of Chaucer.
Love's Garden,

Everidele
Enclosed was, and walled well
With high walls, embatailled,
Portrayed without, and well entayled
With many rich portraitures.

The French original is better still, and gives four arts in unison :—

Quant suis avant un pou alé
Et vy un vergier grant et lé,
Bien cloz de bon mur batillié
Pourtrait dehors, et entaillié
Ou (for au) maintes riches escriptures.

Read also carefully the description of the temples of Mars and Venus in the Knight's Tale. Contemporary French uses 'entaille' even of solid sculpture and of the living form ; and Pygmalion, as a perfect master, professes wood carving, ivory carving, wax-work, and iron-work, no less than stone sculpture :—

Pimalion, uns entaillieres
Pourtraians en fuz * et en pierres,
En mettaux, en os, et en cire,
Et en toute autre matiere.

58. I made a little sketch, when last in Florence, of a subject which will fix the idea of this unity of the arts in your minds. At the base of the tower of Giotto are two rows of hexagonal panels, filled with bas-reliefs. Some of these are by unknown hands,—some by Andrea Pisano, some by Luca della Robbia, two by Giotto himself ; of these I sketched the panel representing the art of Painting.

You have in that bas-relief one of the foundation-stones of the most perfectly-built tower in Europe ; you have that stone carved by its architect's own hand ; you find, further, that this

* For fust, log of wood, erroneously 'fer' in the later printed editions. Compare the account of the works of Art and Nature, towards the end of the Romance of the Rose.

architect and sculptor was the greatest painter of his time, and the friend of the greatest poet ; and you have represented by him a painter in his shop,—bottega,—as symbolic of the entire art of painting.

59. In which representation, please note how carefully Giotto shows you the tabernacles, or niches, in which the paintings are to be placed. Not independent of their frames, these panels of his, you see !

Have you ever considered, in the early history of painting, how important also is the history of the frame maker ? It is a matter, I assure you, needing your very best consideration. For the frame was made before the picture. The painted window is much, but the aperture it fills was thought of before it. The fresco by Giotto is much, but the vault it adorns was planned first. Who thought of these ;—who built ?

Questions taking us far back before the birth of the shepherd boy of Fesolé,—questions not to be answered by history of painting only, still less of painting in *Italy* only.

60. And in pointing out to you this fact, I may once for all prove to you the essential unity of the arts, and show you how impossible it is to understand one without reference to another. Which I wish you to observe all the more closely, that you may use, without danger of being misled, the data, of unequalled value, which have been collected by Crowe and Cavalcasella, in the book which they have called a *History of Painting in Italy*, but which is in fact only a dictionary of details relating to that history. Such a title is an absurdity on the face of it. For, first, you can no more write the history of painting in Italy than you can write the history of the south wind in Italy. The sirocco does indeed produce certain effects at Genoa, and others at Rome ; but what would be the value of a treatise upon the winds, which, for the honour of any country, assumed that every city of it had a native sirocco ?

But, further,—imagine what success would attend the meteorologist who should set himself to give an account of the south wind, but take no notice of the north !

And, finally, suppose an attempt to give you an account of

either wind, but none of the seas, or mountain passes, by which they were nourished, or directed.

61. For instance, I am in this course of lectures to give you an account of a single and minor branch of graphic art,—engraving. But observe how many references to local circumstances it involves. There are three materials for it, we said ;—stone, wood, and metal. Stone engraving is the art of countries possessing marble and gems ; wood engraving, of countries overgrown with forest ; metal engraving, of countries possessing treasures of silver and gold. And the style of a stone engraver is formed on pillars and pyramids ; the style of a wood engraver under the eaves of larch cottages ; the style of a metal engraver in the treasuries of kings. Do you suppose I could rightly explain to you the value of a single touch on brass by Finiguerra, or on box by Bewick, unless I had grasp of the great laws of climate and country ; and could trace the inherited sirocco or tramontana of thought to which the souls and bodies of the men owed their existence ?

62. You see that in this flag of 1300 there is a dark strong line in the centre, against which you read the name of Arnolfo.

In writing our Florentine Dunciad, or History of Fools, can we possibly begin with a better day than All Fools' Day ? On All Fools' Day—the first, if you like better so to call it, of the month of *opening*,—in the year 1300, is signed the document making Arnolfo a citizen of Florence, and in 1310 he dies, chief master of the works of the Cathedral there. To this man, Crowe and Cavalcasella give half a page, out of three volumes of five hundred pages each.

But lower down in my flag, (not put there because of any inferiority, but by order of chronology,) you will see a name sufficiently familiar to you—that of Giotto ; and to him, our historians of painting in Italy give some hundred pages, under the impression, stated by them at page 243 of their volume, that “in his hands, art in the Peninsula became entitled for the first time to the name of Italian.”

63. Art became Italian ! Yes, but *what* art ? Your authors give a perspective—or what they call such,—of the upper

church of Assisi, as if that were merely an accidental occurrence of blind walls for Giotto to paint on!

But how came the upper church of Assisi there? How came it to be vaulted—to be aisled? How came Giotto to be asked to paint upon it?

The art that built it, good or bad, must have been an Italian one, before Giotto. He could not have painted on the air. Let us see how his panels were made for him.

64. This Captain—the centre of our first group—Arnolfo, has always hitherto been called ‘Arnolfo di Lapo;’—Arnolfo the son of Lapo.

Modern investigators come down on us delightedly, to tell us—Arnolfo was *not* the son of Lapo.

In these days you will have half a dozen doctors, writing each a long book, and the sense of all will be,—Arnolfo wasn’t the son of Lapo. Much good may you get of that!

Well, you will find the fact to be, there was a great Northman builder, a true son of Thor, who came down into Italy in 1200, served the order of St. Francis there, built Assisi, taught Arnolfo how to build, with Thor’s hammer, and disappeared, leaving his name uncertain—Jacopo—Lapo—nobody knows what. Arnolfo always recognizes this man as his true father, who put the soul-life into him; he is known to his Florentines always as Lapo’s Arnolfo.

That, or some likeness of that, is the vital fact. You never can get at the literal limitation of living facts. They disguise themselves by the very strength of their life: get told again and again in different ways by all manner of people;—the literalness of them is turned topsy-turvy, inside-out, over and over again;—then the fools come and read them wrong side upwards, or else, say there never was a fact at all. Nothing delights a true blockhead so much as to prove a negative;—to show that everybody has been wrong. Fancy the delicious sensation, to an empty-headed creature, of fancying for a moment that he has emptied everybody else’s head as well as his own! nay, that, for once, his own hollow bottle of a head has had the best of other bottles, and has been *first* empty; first to know—nothing.

65. Hold, then, steadily the first tradition about this Arnolfo. That his real father was called "Cambio" matters to you not a straw. That he never called himself Cambio's Arnolfo—that nobody else ever called him so, down to Vasari's time, is an infinitely significant fact to you. In my twenty-second letter in *Fors Clavigera* you will find some account of the noble habit of the Italian artists to call themselves by their masters' names, considering their master as their true father. If not the name of the master, they take that of their native place, as having owed the character of their life to that. They rarely take their own family name: sometimes it is not even known,—when best known, it is unfamiliar to us. The great Pisan artists, for instance, never bear any other name than 'the Pisan;' among the other five-and-twenty names in my list, not above six, I think, the two German, with four Italian, are family names. Perugino, (Peter of Perugia), Luini, (Bernard of Luino), Quercia, (James of Quercia), Correggio, (Anthony of Correggio), are named from their native places. Nobody would have understood me if I had called Giotto, 'Ambrose Bondone;' or Tintoret, Robusti; or even Raphael, Sanzio. Botticelli is named from his master; Ghiberti from his father-in-law; and Ghirlandajo from his work. Orcagna, who *did*, for a wonder, name himself from his father, Andrea Cione, of Florence, has been always called 'Angel' by everybody else; while Arnolfo, who never named himself from his father, is now like to be fathered against his will.

But, I again beg of you, keep to the old story. For it represents, however inaccurately in detail, clearly in sum, the fact, that some great master of German Gothic at this time came down into Italy, and changed the entire form of Italian architecture by his touch. So that while Niccola and Giovanni Pisano are still virtually Greek artists, experimentally introducing Gothic forms, Arnolfo and Giotto adopt the entire Gothic ideal of form, and thenceforward use the pointed arch and steep gable as the limits of sculpture.

66. Hitherto I have been speaking of the relations of my twenty-five men to each other. But now, please note their

relations altogether to the art before them. These twenty-five include, I say, all the great masters of *Christian* art.

Before them, the art was too savage to be Christian ; afterwards, too carnal to be Christian.

Too savage to be Christian ? I will justify that assertion hereafter ; but you will find that the European art of 1200 includes all the most developed and characteristic conditions of the style in the north which you have probably been accustomed to think of as NORMAN, and which you may always most conveniently call so ; and the most developed conditions of the style in the south, which, formed out of effete Greek, Persian, and Roman tradition, you may, in like manner, most conveniently express by the familiar word BYZANTINE. Whatever you call them, they are in origin adverse in temper, and remain so up to the year 1200. Then an influence appears, seemingly that of one man, Nicholas the Pisan, (our first MASTER, observe,) and a new spirit adopts what is best in each, and gives to what it adopts a new energy of its own, namely, this conscientious and didactic power which is the speciality of its progressive existence. And just as the new-born and natural art of Athens collects and reanimates Pelasgian and Egyptian tradition, purifying their worship, and perfecting their work, into the living heathen faith of the world, so this new-born and natural art of Florence collects and animates the Norman and Byzantine tradition, and forms out of the perfected worship and work of both, the honest Christian faith, and vital craftsmanship, of the world.

67. Get this first summary, therefore, well into your minds. The word 'Norman' I use roughly for North-savage ;—roughly, but advisedly. I mean Lombard, Scandinavian, Frankish ; everything north-savage that you can think of, except Saxon. (I have a reason for that exception ; never mind it just now.) *

* Of course it would have been impossible to express in any accurate terms, short enough for the compass of a lecture, the conditions of opposition between the Heptarchy and the Northmen ;—between the Byzantine and Roman ;—and between the Byzantine and Arab, which form minor, but not less trenchant, divisions of Art-province, for subsequent

All north-savage I call NORMAN, all south-savage I call BYZANTINE ; this latter including dead native Greek primarily—then dead foreign Greek, in Rome ;—then Arabian—Persian—Phœnician—Indian—all you can think of, in art of hot countries, up to this year 1200, I rank under the one term Byzantine. Now all this cold art—Norman, and all this hot art—Byzantine, is virtually dead, till 1200. It has no conscience, no didactic power ;* it is devoid of both, in the sense that dreams are.

Then in the 13th century, men wake as if they heard an alarum through the whole vault of heaven, and true human life begins again, and the cradle of this life is the Val d'Arno. There the northern and southern nations meet ; there they lay down their enmities ; there they are first baptized unto John's baptism for the remission of sins ; there is born, and thence exiled,—thought faithless for breaking the font of baptism to save a child from drowning, in his 'bel San Giovanni,'—the greatest of Christian poets ; he who had pity even for the lost.

68. Now, therefore, my whole history of *Christian* architecture and painting begins with this Baptistery of Florence, and with its associated Cathedral. Arnolfo brought the one into the form in which you now see it ; he laid the foundation of the other, and that to purpose, and he is therefore the CAPTAIN of our first school.

For this Florentine Baptistery † is the great one of the world. Here is the centre of Christian knowledge and power. delineation. If you can refer to my "Stones of Venice," see § 20 of its first chapter.

* Again much too broad a statement : not to be qualified but by a length of explanation here impossible. My lectures on Architecture, now in preparation, will contain further detail.

† At the side of my page, here, I find the following memorandum, which was expanded in the viva-voce lecture. The reader must make what he can of it, for I can't expand it here.

Sense of Italian Church plan.

Baptistry, to make Christians in ; house, or dome, for them to pray and be preached to in ; bell-tower, to ring all over the town, when they were either to pray together, rejoice together, or to be warned of danger.

Harvey's picture of the Covenanters, with a shepherd on the outlook, as a campanile.

And it is one piece of large *engraving*. White substance, cut into, and filled with black, and dark-green.

No more perfect work was afterwards done ; and I wish you to grasp the idea of this building clearly and irrevocably, —first, in order (as I told you in a previous lecture) to quit yourselves thoroughly of the idea that ornament should be decorated construction ; and, secondly, as the noblest type of the intaglio ornamentation, which developed itself into all minor application of black and white to engraving.

69. That it should do so first at Florence, was the natural sequence, and the just reward, of the ancient skill of Etruria in chased metal-work. The effects produced in gold, either by embossing or engraving, were the direct means of giving interest to his surfaces at the command of the ‘auri faber,’ or orfèvre : and every conceivable artifice of studding, chiselling, and interlacing was exhausted by the artists in gold, who were at the head of the metal-workers, and from whom the ranks of the sculptors were reinforced.

The old French word ‘orfroiz,’ (aurifrigia,) expresses essentially what we call ‘frosted’ work in gold ; that which resembles small dew or crystals of hoar-frost ; the ‘frigia’ coming from the Latin frigus. To chase, or enchase, is not properly said of the gold ; but of the jewel which it secures with hoops or ridges, (French, *enchasser**). Then the armourer, or cup and casket maker, added to this kind of decoration that of flat inlaid enamel ; and the silver-worker, finding that the raised filigree (still a staple at Genoa) only attracted tarnish, or got crushed, early sought to decorate a surface which would bear external friction, with labyrinths of safe incision.

70. Of the *security* of incision as a means of permanent decoration, as opposed to ordinary carving, here is a beautiful instance in the base of one of the external shafts of the Cathedral of Lucca ; 13th-century work, which by this time, had it been carved in relief, would have been a shapeless remnant of indecipherable bosses. But it is still as safe as if it had been cut yesterday, because the smooth round mass of the pillar is

* And ‘chassis,’ a window frame, or tracery.

entirely undisturbed ; into that, furrows are cut with a chisel as much under command and as powerful as a burin. The effect of the design is trusted entirely to the depth of these incisions—here dying out and expiring in the light of the marble, there deepened, by drill holes, into as definitely a black line as if it were drawn with ink ; and describing the outline of the leafage with a delicacy of touch and of perception which no man will ever surpass, and which very few have rivalled, in the proudest days of design.

71. This security, in silver plates, was completed by filling the furrows with the black paste which at once exhibited and preserved them. The transition from that niello-work to modern engraving is one of no real moment : my object is to make you understand the qualities which constitute the *merit* of the engraving, whether charged with niello or ink. And this I hope ultimately to accomplish by studying with you some of the works of the four men, Botticelli and Mantegna in the south, Durer and Holbein in the north, whose names I have put in our last flag, above and beneath those of the three mighty painters, Perugino the captain, Bellini on one side—Luini on the other.

The four following lectures * will contain data necessary for such study : you must wait longer before I can place before you those by which I can justify what must greatly surprise some of my audience—my having given Perugino the captain's place among the three painters.

72. But I do so, at least primarily, because what is commonly thought affected in his design is indeed the true remains of the great architectural symmetry which was soon to be lost, and which makes him the true follower of Arnolfo and Brunelleschi ; and because he is a sound craftsman and workman to the very heart's core. A noble, gracious, and quiet labourer from youth to death,—never weary, never impatient,

* This present lecture does not, as at present published, justify its title ; because I have not thought it necessary to write the viva-voce portions of it which amplified the 69th paragraph. I will give the substance of them in better form elsewhere ; meantime the part of the lecture here given may be in its own way useful.

never untender, never untrue. Not Tintoret in power, not Raphael in flexibility, not Holbein in veracity, not Luini in love,—their gathered gifts he has, in balanced and fruitful measure, fit to be the guide, and impulse, and father of all.

LECTURE III.

THE TECHNICS OF WOOD ENGRAVING.

73. I AM to-day to begin to tell you what it is necessary you should observe respecting methods of manual execution in the two great arts of engraving. Only to *begin* to tell you. There need be no end of telling you such things, if you care to hear them. The theory of art is soon mastered ; but ‘dal detto al fatto, v’e gran tratto ;’ and as I have several times told you in former lectures, every day shows me more and more the importance of the Hand.

74. Of the hand as a Servant, observe,—not of the hand as a Master. For there are two great kinds of manual work : one in which the hand is continually receiving and obeying orders ; the other in which it is acting independently, or even giving orders of its own. And the dependent and submissive hand is a noble hand ; but the independent or imperative hand is a vile one.

That is to say, as long as the pen, or chisel, or other graphic instrument, is moved under the direct influence of mental attention, and obeys orders of the brain, it is working nobly ; the moment it moves independently of them, and performs some habitual dexterity of its own, it is base.

75. *Dexterity*—I say ;—some ‘right-handedness’ of its own. We might wisely keep that word for what the hand does at the mind’s bidding ; and use an opposite word—sinisterity,—for what it does at its own. For indeed we want such a word in speaking of modern art ;—it is all full of sinisterity. Hands independent of brains ;—the left hand, by division of labour, not knowing what the right does,—still less what it ought to do.

76. Turning, then, to our special subject. All engraving, I said, is intaglio in the solid. But the solid, in wood engraving, is a coarse substance, easily cut; and in metal, a fine substance, not easily. Therefore, in general, you may be prepared to accept ruder and more elementary work in one than the other; and it will be the means of appeal to blunter minds.

You probably already know the difference between the actual methods of producing a printed impression from wood and metal; but I may perhaps make the matter a little more clear. In metal engraving, you cut ditches, fill them with ink, and press your paper into them. In wood engraving, you leave ridges, rub the tops of them with ink, and stamp them on your paper.

The instrument with which the substance, whether of the wood or steel, is cut away, is the same. It is a solid ploughshare, which, instead of throwing the earth aside, throws it up and out, producing at first a simple ravine, or furrow, in the wood or metal, which you can widen by another cut, or extend by successive cuts. This (Fig. 1) is the general shape of the solid ploughshare:



FIG. 1.

but it is of course made sharper or blunter at pleasure. The furrow produced is at first the wedge-shaped or cuneiform ravine, already so much dwelt upon in my lectures on Greek sculpture.

77. Since, then, in wood printing, you print from the surface left solid; and, in metal printing, from the hollows cut into it, it follows that if you put few touches on wood, you draw, as on a slate, with white lines, leaving a quantity of black; but if you put few touches on metal, you draw with black lines, leaving a quantity of white.

Now the eye is not in the least offended by quantity of white, but is, or ought to be, greatly saddened and offended

by quantity of black. Hence it follows that you must never put little work on wood. You must not sketch upon it. You may sketch on metal as much as you please.

78. "Paradox," you will say, as usual. "Are not all our journals,—and the best of them, *Punch*, par excellence,—full of the most brilliantly swift and slight sketches, engraved on wood; while line-engravings take ten years to produce, and cost ten guineas each when they are done?"

Yes, that is so; but observe, in the first place, what appears to you a sketch on wood is not so at all, but a most laborious and careful imitation of a sketch on paper; whereas when you see what appears to be a sketch on metal, it *is* one. And in the second place, so far as the popular fashion is contrary to this natural method,—so far as we do in reality try to produce effects of sketching in wood, and of finish in metal,—our work is wrong.

Those apparently careless and free sketches on the wood ought to have been stern and deliberate; those exquisitely toned and finished engravings on metal ought to have looked, instead, like free ink sketches on white paper. That is the theorem which I propose to you for consideration, and which, in the two branches of its assertion, I hope to prove to you; the first part of it, (that wood-cutting should be careful,) in this present lecture; the second, (that metal-cutting should be, at least in a far greater degree than it is now, slight, and free,) in the following one.

79. Next, observe the distinction in respect of *thickness*, no less than number, of lines which may properly be used in the two methods.

In metal engraving, it is easier to lay a fine line than a thick one; and however fine the line may be, it lasts;—but in wood engraving it requires extreme precision and skill to leave a thin dark line, and when left, it will be quickly beaten down by a careless printer. Therefore, the virtue of wood engraving is to exhibit the qualities and power of *thick* lines; and of metal engraving, to exhibit the qualities and power of *thin* ones.

All thin dark lines, therefore, in wood, broadly speaking,

are to be used only in case of necessity ; and thick lines, on metal, only in case of necessity.

. 80. Though, however, thin *dark* lines cannot easily be produced in wood, thin *light* ones may be struck in an instant. Nevertheless, even thin *light* ones must not be used, except with extreme caution. For observe, they are equally useless as outline, and for expression of mass. You know how far from exemplary or delightful your boy's first quite voluntary exercises in white line drawing on your slate were? You could, indeed, draw a goblin satisfactorily in such method ;—a round O, with arms and legs to it, and a scratch under two dots in the middle, would answer the purpose ; but if you wanted to draw a pretty face, you took pencil or pen, and paper—not your slate. Now, that instinctive feeling that a white outline is wrong, is deeply founded. For Nature herself draws with diffused light, and concentrated dark ;—never, except in storm or twilight, with diffused dark, and concentrated light ; and the thing we all like best to see drawn—the human face—cannot be drawn with white touches, but by extreme labour. For the pupil and iris of the eye, the eyebrow, the nostril, and the lip are all set in dark on pale ground. You can't draw a white eyebrow, a white pupil of the eye, a white nostril, and a white mouth, on a dark ground. Try it, and see what a spectre you get. But the same number of dark touches, skilfully applied, will give the idea of a beautiful face. And what is true of the subtlest subject you have to represent, is equally true of inferior ones. Nothing lovely can be quickly represented by white touches. You must hew out, if your means are so restricted, the form by sheer labour ; and that both cunning and dextrous. The Florentine masters, and Durer, often practise the achievement, and there are many drawings by the Lippis, Mantegna, and other leading Italian draughtsmen, completed to great perfection with the white line ; but only for the sake of severest study, nor is their work imitable by inferior men. And such studies, however accomplished, always mark a disposition to regard chiaroscuro too much, and local colour too little.

We conclude, then, that we must never trust, in wood, to

our power of outline with white ; and our general laws, thus far determined, will be—thick lines in wood ; thin ones in metal ; complete drawing on wood ; sketches, if we choose, on metal.

81. But why, in wood, lines at all ? Why not cut out white spaces, and use the chisel as if its incisions were so much white paint ? Many fine pieces of wood-cutting are indeed executed on this principle. Bewick does nearly all his foliage so ; and continually paints the light plumes of his birds with single touches of his chisel, as if he were laying on white.

But this is not the finest method of wood-cutting. It implies the idea of a system of light and shade in which the shadow is totally black. Now, no light and shade can be good, much less pleasant, in which all the shade is stark black. Therefore the finest wood-cutting ignores light and shade, and expresses only form, and *dark local colour*. And it is convenient, for simplicity's sake, to anticipate what I should otherwise defer telling you until next lecture, that fine metal engraving, like fine wood-cutting, ignores light and shade ; and that, in a word, all good engraving whatsoever does so.

82. I hope that my saying so will make you eager to interrupt me. 'What ! Rembrandt's etchings, and Lupton's mezzotints, and Le Keux's line-work,—do you mean to tell us that these ignore light and shade ?'

I never said that *mezzotint* ignored light and shade, or ought to do so. Mezzotint is properly to be considered as chiaroscuro drawing on metal. But I do mean to tell you that both Rembrandt's etchings, and Le Keux's finished line-work, are misapplied labour, in so far as they regard chiaroscuro ; and that consummate engraving never uses it as a primal element of pleasure.

83. We have now got our principles so far defined that I can proceed to illustration of them by example.

Here are facsimiles, very marvellous ones,* of two of the

* By Mr. Burgess. The toil and skill necessary to produce a facsimile of this degree of precision will only be recognized by the reader who has had considerable experience of actual work.

best wood engravings ever produced by art,—two subjects in Holbein's *Dance of Death*. You will probably like best that I should at once proceed to verify my last and most startling statement, that fine engraving disdained *chiaroscuro*.

This vignette (Fig. 2) represents a sunset in the open mountainous fields of southern Germany. And Holbein is so entirely careless about the light and shade, which a Dutchman would first have thought of, as resulting from the sunset, that, as he works, he forgets altogether where his light comes from. Here, actually, the shadow of the figure is cast from the side, right across the picture, while the sun is in front. And there is not the slightest attempt to indicate gradation of light in the sky, darkness in the forest, or any other positive element of *chiaroscuro*.

This is not because Holbein cannot give *chiaroscuro* if he chooses. He is twenty times a stronger master of it than Rembrandt; but he, therefore, knows exactly when and how to use it; and that wood engraving is not the proper means for it. The quantity of it which is needful for his story, and will not, by any sensational violence, either divert, or vulgarly enforce, the attention, he will give; and that with an unrivalled subtlety. Therefore I must ask you for a moment or two to quit the subject of technics, and look what these two woodcuts mean.

84. The one I have first shown you is of a ploughman ploughing at evening. It is Holbein's object, here, to express the diffused and intense light of a golden summer sunset, so far as is consistent with grander purposes. A modern French or English *chiaroscurist* would have covered his sky with fleecy clouds, and relieved the ploughman's hat and his horses against it in strong black, and put sparkling touches on the furrows and grass. Holbein scornfully casts all such tricks aside; and draws the whole scene in pure white, with simple outlines.

85. And yet, when I put it beside this second vignette, (Fig. 3), which is of a preacher preaching in a feebly-lighted church, you will feel that the diffused warmth of the one subject, and diffused twilight in the other, are complete; and

they will finally be to you more impressive than if they had been wrought out with every superficial means of effect, on each block.

For it is as a symbol, not as a scenic effect, that in each case the chiaroscuro is given. Holbein, I said, is at the head of the painter-reformers, and his Dance of Death is the most energetic and telling of all the forms given, in this epoch, to the *Rationalist* spirit of reform, preaching the new Gospel of Death,—“It is no matter whether you are priest or layman, what you believe, or what you do : here is the end.” You shall see, in the course of our inquiry, that Botticelli, in like manner, represents the *Faithful* and *Catholic* temper of reform.

86. The teaching of Holbein is therefore always melancholy,—for the most part purely rational ; and entirely furious in its indignation against all who, either by actual injustice in this life, or by what he holds to be false promise of another, destroy the good, or the energy, of the few days which man has to live. Against the rich, the luxurious, the Pharisee, the false lawyer, the priest, and the unjust judge, Holbein uses his fiercest mockery ; but he is never himself unjust ; never caricatures or equivocates ; gives the facts as he knows them, with explanatory symbols, few and clear.

87. Among the powers which he hates, the pathetic and ingenious preaching of untruth is one of the chief ; and it is curious to find his biographer, knowing this, and reasoning, as German critics nearly always do, from acquired knowledge, not perception, imagine instantly that he sees hypocrisy in the face of Holbein's preacher. “How skilfully,” says Dr. Woltmann, “is the preacher propounding his doctrines ; how thoroughly is his hypocrisy expressed in the features of his countenance, and in the gestures of his hands.” But look at the cut yourself, candidly. I challenge you to find the slightest trace of hypocrisy in either feature or gesture. Holbein knew better. It is not the hypocrite who has power in the pulpit. It is the *sincere* preacher of untruth who does mischief there. The hypocrite's place of power is in trade, or in general society ; none but the sincere ever get fatal influence

in the pulpit. This man is a refined gentleman—ascetic, earnest, thoughtful, and kind. He scarcely uses the vantage even of his pulpit,—comes aside out of it, as an eager man would, pleading; he is intent on being understood—is understood; his congregation are delighted—you might hear a pin drop among them: one is asleep indeed, who cannot see him, (being under the pulpit,) and asleep just because the teacher is as gentle as he is earnest, and speaks quietly.

88. How are we to know, then, that he speaks in vain? First, because among all his hearers you will not find one shrewd face. They are all either simple or stupid people: there is one nice woman in front of all, (else Holbein's representation had been caricature,) but she is not a shrewd one.

Secondly, by the light and shade. The church is not in extreme darkness—far from that; a grey twilight is over everything, but the sun is totally shut out of it;—not a ray comes in even at the window—that is darker than the walls, or vault.

Lastly, and chiefly, by the mocking expression of Death. Mocking, but not angry. The man has been preaching what he thought true. Death laughs at him, but is not indignant with him.

Death comes quietly: *I am going to be preacher now; here is your own hour-glass, ready for me. You have spoken many words in your day. But "of the things which you have spoken, this is the sum,"—your death-warrant, signed and sealed. There's your text for to-day.*

89. Of this other picture, the meaning is more plain, and far more beautiful. The husbandman is old and gaunt, and has past his days, not in speaking, but pressing the iron into the ground. And the payment for his life's work is, that he is clothed in rags, and his feet are bare on the clods; and he has no hat—but the brim of a hat only, and his long, unkempt grey hair comes through. But all the air is full of warmth and of peace; and, beyond his village church, there is, at last, light indeed. His horses lag in the furrow, and his own limbs totter and fail: but one comes to help him. 'It is a long field,' says Death; 'but we'll get to the end of it to-day, —you and I.'

90. And now that we know the meaning, we are able to discuss the technical qualities farther.

Both of these engravings, you will find, are executed with blunt lines ; but more than that, they are executed with *quiet* lines, entirely steady.

Now, here I have in my hand a lively woodcut of the present day—a good average type of the modern style of wood-cutting, which you will all recognize.*

The shade in this is drawn on the wood (not *cut*, but drawn, observe,) at the rate of at least ten lines in a second : Holbein's at the rate of about one line in three seconds.†

91. Now there are two different matters to be considered with respect to these two opposed methods of execution. The first, that the rapid work, though easy to the artist, is very difficult to the woodcutter ; so that it implies instantly a separation between the two crafts, and that your wood engraver has ceased to be a draughtsman. I shall return to this point. I wish to insist on the other first ; namely, the effect of the more deliberative method on the drawing itself.

92. When the hand moves at the rate of ten lines in a second, it is indeed under the government of the muscles of the wrist and shoulder ; but it cannot possibly be under the complete government of the brains. I am able to do this zigzag line evenly, because I have got the use of the hand from practice ; and the faster it is done, the evenner it will be. But I have no mental authority over every line I thus lay : chance regulates them. Whereas, when I draw at the rate of two or three seconds to each line, my hand disobeys the muscles a little—the mechanical accuracy is not so great ; nay, there ceases to be any *appearance* of dexterity at all. But there is, in reality, more manual skill required in the slow work than in the swift,—and all the while the hand is thoroughly under the orders of the brains. Holbein deliberately resolves, for every line, as it goes along, that it shall be

* The ordinary title-page of Punch.

† In the lecture-room, the relative rates of execution were shown ; I arrived at this estimate by timing the completion of two small pieces of shade in the two methods.

so thick, so far from the next,—that it shall begin here, and stop there. And he is deliberately assigning the utmost quantity of meaning to it, that a line will carry.

93. It is not fair, however, to compare common work of one age with the best of another. Here is a woodcut of Tenniel's, which I think contains as high qualities as it is possible to find in modern art.* I hold it as beyond others fine, because there is not the slightest caricature in it. No face, no attitude, is pushed beyond the degree of natural humour they would have possessed in life; and in precision of momentary expression, the drawing is equal to the art of any time, and shows power which would, if regulated, be quite adequate to producing an immortal work.

94. Why, then, is it *not* immortal? You yourselves, in compliance with whose demand it was done, forgot it the next week. It will become historically interesting; but no man of true knowledge and feeling will ever keep this in his cabinet of treasure, as he does these woodcuts of Holbein's.

The reason is that this is base coin,—alloyed gold. There is gold in it, but also a quantity of brass and lead—wilfully added—to make it fit for the public. Holbein's is beaten gold, seven times tried in the fire. Of which commonplace but useful metaphor the meaning here is, first, that to catch the vulgar eye a quantity of,—so-called,—light and shade is added by Tenniel. It is effective to an ignorant eye, and is ingeniously disposed; but it is entirely conventional and false, unendurable by any person who knows what chiaroscuro is.

Secondly, for one line that Holbein lays, Tenniel has a dozen. There are, for instance, a hundred and fifty-seven lines in Sir Peter Teazle's wig, without counting dots and slight cross-hatching;—but the entire face and flowing hair of Holbein's preacher are done with forty-five lines, all told.

95. Now observe what a different state of mind the two artists must be in on such conditions;—one, never in a hurry, never doing anything that he knows is wrong; never doing a line badly that he can do better; and appealing only to the

* John Bull as Sir Oliver Surface, with Sir Peter Teazle and Joseph Surface. It appeared in *Punch*, early in 1863.

feelings of sensitive persons, and the judgment of attentive ones. That is Holbein's habit of soul. What is the habit of soul of every modern engraver? Always in a hurry; everywhere doing things which he knows to be wrong—(Tenniel knows his light and shade to be wrong as well as I do)—continually doing things badly which he was able to do better; and appealing exclusively to the feelings of the dull, and the judgment of the inattentive.

Do you suppose that is not enough to make the difference between mortal and immortal art,—the original genius being supposed alike in both? *

96. Thus far of the state of the artist himself. I pass next to the relation between him and his subordinate, the wood-cutter.

The modern artist requires him to cut a hundred and fifty-seven lines in the wig only,—the old artist requires him to cut forty-five for the face, and long hair, altogether. The actual proportion is roughly, and on the average, about one to twenty of cost in manual labour, ancient to modern,—the twentieth part of the mechanical labour, to produce an immortal instead of a perishable work,—the twentieth part of the labour; and—which is the greatest difference of all—that twentieth part, at once less mechanically difficult, and more mentally pleasant. Mr. Otley, in his general History of Engraving, says, "The greatest difficulty in wood engraving occurs in clearing out the minute quadrangular lights;" and in any modern woodcut you will see that where the lines of the drawing cross each other to produce shade, the white interstices are cut out so neatly that there is no appearance of any jag or break in the lines; they look exactly as if they had been drawn with a pen. It is chiefly difficult to cut the pieces clearly out when the lines cross at right angles; easier when they form oblique or diamond-shaped interstices; but

* In preparing these passages for the press, I feel perpetual need of qualifications and limitations, for it is impossible to surpass the humour, or precision of expressional touch, in the really golden parts of Tenniel's works; and they *may* be immortal, as representing what is best in their day.

in any case, some half-dozen cuts, and in square crossings as many as twenty, are required to clear one interstice. Therefore if I carelessly draw six strokes with my pen across other six, I produce twenty-five interstices, each of which will need at least six—perhaps twenty, careful touches of the burin to clear out.—Say ten for an average; and I demand two hundred and fifty exquisitely precise touches from my engraver, to render ten careless ones of mine.

97. Now I take up Punch, at his best. The whole of the left side of John Bull's waistcoat—the shadow on his knee-breeches and great-coat—the whole of the Lord Chancellor's gown, and of John Bull's and Sir Peter Teazle's complexions, are worked with finished precision of cross-hatching. These have indeed some purpose in their texture; but in the most wanton and gratuitous way, the wall below the window is cross-hatched too, and that not with a double, but a treble line, Fig. 4.

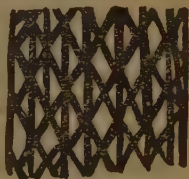


FIG. 4.

There are about thirty of these columns, with thirty-five interstices each: approximately, 1,050—certainly not fewer—interstices to be deliberately cut clear, to get that two inches square of shadow.

Now calculate—or think enough to feel the impossibility of calculating—the number of woodcuts used daily for our popular prints, and how many men are night and day cutting 1,050 square holes to the square inch, as the occupation of their manly life. And Mrs. Beecher Stowe and the North Americans fancy they have abolished slavery!

98. The workman cannot have even the consolation of pride; for his task, even in its finest accomplishment, is not really difficult,—only tedious. When you have once got into the practice, it is as easy as lying. To cut regular holes *without* a purpose is easy enough; but to cut *irregular* holes *with* a purpose, that is difficult, for ever;—no tricks of tool or trade will give you power to do that.

The supposed difficulty—the thing which, at all events, it takes time to learn, is to cut the interstices neat, and each

like the other. But is there any reason, do you suppose, for their being neat, and each like the other? So far from it, they would be twenty times prettier if they were irregular, and each different from the other. And an old woodcutter, instead of taking pride in cutting these intestices smooth and alike, resolutely cuts them rough and irregular; taking care, at the same time, never to have any more than are wanted, this being only one part of the general system of intelligent manipulation, which made so good an artist of the engraver that it is impossible to say of any standard old woodcut, whether the draughtsman engraved it himself or not. I should imagine, from the character and subtlety of the touch, that every line of the Dance of Death had been engraved by Holbein; we know it was not, and that there can be no certainty given by even the finest pieces of wood execution of anything more than perfect harmony between the designer and workman. And consider how much this harmony demands in the latter. Not that the modern engraver is unintelligent in applying his mechanical skill: very often he greatly improves the drawing; but we never could mistake his hand for Holbein's.

99. The true merit, then, of wood execution, as regards this matter of cross-hatching, is first that there be no more crossing than necessary; secondly, that all the interstices be various, and rough. You may look through the entire series of the Dance of Death without finding any cross-hatching whatever, except in a few unimportant bits of background, so rude as to need scarcely more than one touch to each interstice. Albert Durer crosses more definitely; but yet, in any fold of his drapery, every white spot differs in size from every other, and the arrangement of the whole is delightful, by the kind of variety which the spots on a leopard have.

On the other hand, where either expression or form can be rendered by the shape of the lights and darks, the old engraver becomes as careful as in an ordinary ground he is careless.

The endeavour, with your own hand, and common pen and ink, to copy a small piece of either of the two Holbein woodcuts (Figures 2 and 3) will prove this to you better than any words.

100. I said that, had Tenniel been rightly trained, there

might have been the making of a Holbein, or nearly a Holbein, in him. I do not know ; but I can turn from his work to that of a man who was not trained at all, and who was, without training, Holbein's equal.

Equal, in the sense that this brown stone, in my left hand, is the equal, though not the likeness, of that in my right. They are both of the same true and pure crystal ; but the one is brown with iron, and never touched by forming hand ; the other has never been in rough companionship, and has been exquisitely polished. So with these two men. The one was the companion of Erasmus and Sir Thomas More. His father was so good an artist that you cannot always tell their drawings asunder. But the other was a farmer's son ; and learned his trade in the back shops of Newcastle.

Yet the first book I asked you to get was his biography ; and in this frame are set together a drawing by Hans Holbein, and one by Thomas Bewick. I know which is most scholarly ; but I do *not* know which is best.

101. It is much to say for the self-taught Englishman ;—yet do not congratulate yourselves on his simplicity. I told you, a little while since, that the English nobles had left the history of birds to be written, and their spots to be drawn, by a printer's lad ;—but I did not tell you their farther loss in the fact that this printer's lad could have written their own histories, and drawn their own spots, if they had let him. But they had no history to be written ; and were too closely maculate to be portrayed ;—white ground in most places altogether obscured. Had there been Mores and Henrys to draw, Bewick could have drawn them ; and would have found his function. As it was, the nobles of his day left him to draw the frogs, and pigs, and sparrows—of his day, which seemed to him, in his solitude, the best types of its Nobility. No sight or thought of beautiful things was ever granted him ;—no heroic creature, goddess-born—how much less any native Deity—ever shone upon him. To his utterly English mind, the straw of the stye, and its tenantry, were abiding truth ;—the cloud of Olympus, and its tenantry, a child's dream. He could draw a pig, but not an Aphrodite.

102. The three pieces of woodcut from his Fables (the two lower ones enlarged) in the opposite plate, show his utmost strength and utmost rudeness. I must endeavour to make you thoroughly understand both:—the magnificent artistic power, the flawless virtue, veracity, tenderness,—the infinite humour of the man ; and yet the difference between England and Florence, in the use they make of such gifts in their children.

For the moment, however, I confine myself to the examination of technical points ; and we must follow our former conclusions a little further.

103. Because our lines in wood must be thick, it becomes an extreme virtue in wood engraving to economize lines,—not merely, as in all other art, to save time and power, but because, our lines being necessarily blunt, we must make up our minds to do with fewer, by many, than are in the object. But is this necessarily a disadvantage?

Absolutely, an immense disadvantage—a woodcut never can be so beautiful or good a thing as a painting, or line engraving. But in its own separate and useful way, an excellent thing, because, practised rightly, it exercises in the artist, and summons in you, the habit of abstraction ; that is to say, of deciding what are the essential points in the things you see, and seizing these ; a habit entirely necessary to strong humanity ; and so natural to all humanity, that it leads, in its indolent and undisciplined states, to all the vulgar amateur's liking of sketches better than pictures. The sketch seems to put the thing for him into a concentrated and exciting form.

104. Observe, therefore, to guard you from this error, that a bad sketch is good for nothing ; and that nobody can make a good sketch unless they generally are trying to finish with extreme care. But the abstraction of the essential particulars in his subject by a line-master, has a peculiar didactic value. For painting, when it is complete, leaves it much to your own judgment what to look at ; and, if you are a fool, you look at the wrong thing ;—but in a fine woodcut, the master says to you, “ You *shall* look at this or at nothing.”

105. For example, here is a little tailpiece of Bewick's, to



A.



B.



C.

PLATE I.—THINGS CELESTIAL AND TERRESTRIAL.
As appear'd to the English Mind.

the fable of the Frogs and the Stork.* He is, as I told you, as stout a reformer as Holbein, or Botticelli, or Luther, or Savonarola; and, as an impartial reformer, hits right and left, at lower or upper classes, if he sees them wrong. Most frequently, he strikes at vice without reference to class; but in this vignette he strikes definitely at the degradation of the viler popular mind which is incapable of being governed, because it cannot understand the nobleness of kingship. He has written—better than written, engraved, sure to suffer no slip of type—his legend under the drawing; so that we know his meaning:

“Set them up with a king, indeed!”

106. There is an audience of seven frogs, listening to a speaker, or croaker, in the middle; and Bewick has set himself to show in all, but especially in the speaker, essential frogginess of mind—the marsh temper. He could not have done it half so well in painting as he has done by the abstraction of wood-outline. The characteristic of a manly mind, or body, is to be gentle in temper, and firm in constitution; the contrary essence of a froggy mind and body is to be angular in temper, and flabby in constitution. I have enlarged Bewick's orator-frog for you, Plate I., c., and I think you will feel that he is entirely expressed in those essential particulars.

This being perfectly good woodcutting, notice especially its deliberation. No scrawling or scratching, or cross-hatching, or ‘free’ work of any sort. Most deliberate laying down of solid lines and dots, of which you cannot change one. The real difficulty of wood engraving is to cut every one of these black lines or spaces of the exactly right shape, and not at all to cross-hatch them cleanly.

107. Next, examine the technical treatment of the pig, above. I have purposely chosen this as an example of a white object on dark ground, and the frog as a dark object on light ground, to explain to you what I mean by saying that fine engraving regards local colour, but not light and shade. You see both frog and pig are absolutely without light and shade. The frog, indeed, casts a shadow; but his hind leg is as white as his

* From Bewick's *Æsop's Fables*.

throat. In the pig you don't even know which way the light falls. But you know at once that the pig is white, and the frog brown or green.

108. There are, however, two pieces of *chiaroscuro implied* in the treatment of the pig. It is assumed that his curly tail would be light against the background—dark against his own rump. This little piece of heraldic quartering is absolutely necessary to solidify him. He would have been a white ghost of a pig, flat on the background, but for that alternative tail, and the bits of dark behind the ears. Secondly: Where the shade is necessary to suggest the position of his ribs, it is given with graphic and chosen points of dark, as few as possible; not for the sake of the shade at all, but of the skin and bone.

109. That, then, being the law of refused *chiaroscuro*, observe further the method of outline. We said that we were to have thick lines in wood, if possible. Look what thickness of black outline Bewick has left under our pig's chin, and above his nose.

But that is not a line at all, you think?

No;—a modern engraver would have made it one, and prided himself on getting it fine. Bewick leaves it actually thicker than the snout, but puts all his ingenuity of touch to vary the forms, and break the extremities of his white cuts, so that the eye may be refreshed and relieved by new forms at every turn. The group of white touches filling the space between snout and ears might be a wreath of fine-weather clouds, so studiously are they grouped and broken.

And nowhere, you see, does a single black line cross another.

Look back to Figure 4, page 55, and you will know, henceforward, the difference between good and bad woodcutting.

110. We have also, in the lower woodcut, a notable instance of Bewick's power of abstraction. You will observe that one of the chief characters of this frog, which makes him humorous—next to his vain endeavour to get some firmness into his forefeet—is his obstinately angular hump-back. And you must feel, when you see it so marked, how important a gen-

eral character of a frog it is to have a hump-back,—not at the shoulders, but the loins.

111. Here, then, is a case in which you will see the exact function that anatomy should take in art.

All the most scientific anatomy in the world would never have taught Bewick, much less you, how to draw a frog.

But when once you *have* drawn him, or looked at him, so as to know his points, it then becomes entirely interesting to find out *why* he has a hump-back. So I went myself yesterday to Professor Rolleston for a little anatomy, just as I should have gone to Professor Phillips for a little geology; and the Professor brought me a fine little active frog; and we put him on the table, and made him jump all over it, and then the Professor brought in a charming Squelette of a frog, and showed me that he needed a projecting bone from his rump, as a bird needs it from his breast,—the one to attach the strong muscles of the hind legs, as the other to attach those of the fore-legs or wings. So that the entire leaping power of the frog is in his hump-back, as the flying power of the bird is in its breastbone. And thus this Frog Parliament is most literally a Rump Parliament—everything depending on the hind legs, and nothing on the brains; which makes it wonderfully like some other Parliaments we know of nowadays, with Mr. Ayrton and Mr. Lowe for their æsthetic and acquisitive eyes, and a rump of Railway Directors.

112. Now, to conclude, for want of time only—I have but touched on the beginning of my subject,—understand clearly and finally this simple principle of all art, that the best is that which realizes absolutely, if possible. Here is a viper by Carpaccio: you are afraid to go near it. Here is an arm-chair by Carpaccio: you who came in late, and are standing, to my regret, would like to sit down in it. This is consummate art; but you can only have that with consummate means, and exquisitely trained and hereditary mental power.

With inferior means, and average mental power, you must be content to give a rude abstraction; but if rude abstraction is to be made, think what a difference there must be between a wise man's and a fool's; and consider what heavy responsi-

bility lies upon you in your youth, to determine, among realities, by what you will be delighted, and, among imaginations, by whose you will be led.

LECTURE IV.

THE TECHNICS OF METAL ENGRAVING.

113. WE are to-day to examine the proper methods for the technical management of the most perfect of the arms of precision possessed by the artist. For you will at once understand that a line cut by a finely-pointed instrument upon the smooth surface of metal is susceptible of the utmost fineness that can be given to the *definite* work of the human hand. In drawing with pen upon paper, the surface of the paper is slightly rough; necessarily, two points touch it instead of one, and the liquid flows from them more or less irregularly, whatever the draughtsman's skill. But you cut a metallic surface with one edge only; the furrow drawn by a skater on the surface of ice is like it on a large scale. Your surface is polished, and your line may be wholly faultless, if your hand is.

114. And because, in such material, effects may be produced which no penmanship could rival, most people, I fancy, think that a steel plate half engraves itself; that the workman has no trouble with it, compared to that of a pen draughtsman.

To test your feeling in this matter accurately, here is a manuscript book written with pen and ink, and illustrated with flourishes and vignettes.

You will all, I think, be disposed, on examining it, to exclaim, How wonderful! and even to doubt the possibility of every page in the book being completed in the same manner. Again, here are three of my own drawings, executed with the pen, and Indian ink, when I was fifteen. They are copies from large lithographs by Prout; and I imagine that most of my pupils would think me very tyrannical if I requested them



PLATE II.—THE STAR OF FLORENCE.

to do anything of the kind themselves. And yet, when you see in the shop windows a line engraving like this,* or this,* either of which contains, alone, as much work as fifty pages of the manuscript book, or fifty such drawings as mine, you look upon its effect as quite a matter of course,—you never say ‘how wonderful’ *that* is, nor consider how you would like to have to live, by producing anything of the same kind yourselves.

115. Yet you cannot suppose it is in reality easier to draw a line with a cutting point, not seeing the effect at all, or, if any effect, seeing a gleam of light instead of darkness, than to draw your black line at once on the white paper? You cannot really think † that there is something complacent, sympathetic, and helpful in the nature of steel; so that while a pen-and-ink sketch may always be considered an achievement proving cleverness in the sketcher, a sketch on steel comes out by a mere favour of the indulgent metal; or that the plate is woven like a piece of pattern silk, and the pattern is developed by pasteboard cards punched full of holes? Not so. Look close at this engraving, or take a smaller and simpler one, Turner’s Mercury and Argus,—imagine it to be a drawing in pen and ink, and yourself required similarly to produce its parallel! True, the steel point has the one advantage of not blotting, but it has tenfold or twentyfold disadvantage, in that you cannot slur, nor efface, except in a very resolute and laborious way, nor play with it, nor even see what you are doing with it at the moment, far less the effect that is to be. You must *feel* what you are doing with it, and know precisely what you have got to do; how deep, how broad, how far apart your lines must be, etc. and etc., (a couple of lines of etceteras would not be enough to imply all you must know). But suppose the plate *were* only a pen drawing: take your pen—your

* Miller’s large plate of the Grand Canal, Venice, after Turner; and Goodall’s, of Tivoli, after Turner. The other examples referred to are left in the University Galleries.

† This paragraph was not read at the lecture, time not allowing:—it is part of what I wrote on engraving some years ago, in the papers for the Art Journal, called the Cestus of Aglaia.

finest—and just try to copy the leaves that entangle the head of Io, and her head itself; remembering always that the kind of work required here is mere child's play compared to that of fine figure engraving. Nevertheless, take a small magnifying glass to this—count the dots and lines that gradate the nostrils and the edges of the facial bone; notice how the light is left on the top of the head by the stopping, at its outline, of the coarse touches which form the shadows under the leaves; examine it well, and then—I humbly ask of you—try to do a piece of it yourself! You clever sketcher—you young lady or gentleman of genius—you eye-glassed dilettante—you current writer of criticism royally plural,—I beseech you,—do it yourself; do the merely etched outline yourself, if no more. Look you,—you hold your etching needle this way, as you would a pencil, nearly; and then,—you scratch with it! it is as easy as lying. Or if you think that too difficult, take an easier piece;—take either of the light sprays of foliage that rise against the fortress on the right, pass your lens over them—look how their fine outline is first drawn, leaf by leaf; then how the distant rock is put in between, with broken lines, mostly stopping before they touch the leaf-outline; and again, I pray you, do it yourself,—if not on that scale, on a larger. Go on into the hollows of the distant rock,—traverse its thickets,—number its towers;—count how many lines there are in a laurel bush—in an arch—in a casement; some hundred and fifty, or two hundred, deliberately drawn lines, you will find, in every square quarter of an inch;—say *three thousand to the inch*,—each, with skilful intent, put in its place! and then consider what the ordinary sketcher's work must appear, to the men who have been trained to this!

116. “But might not more have been done by three thousand lines to a square inch?” you will perhaps ask. Well, possibly. It may be with lines as with soldiers: three hundred, knowing their work thoroughly, may be stronger than three thousand less sure of their aim. We shall have to press close home this question about numbers and purpose presently;—it is not the question now. Suppose certain results required,—atmospheric effects, surface textures, transparen-

cies of shade, confusions of light,—then, more could *not* be done with less. There are engravings of this modern school, of which, with respect to their particular aim, it may be said, most truly, they “cannot be better done.”

Here is one just finished,—or, at least, finished to the eyes of ordinary mortals, though its fastidious master means to re-touch it;—a quite pure line engraving, by Mr. Charles Henry Jeens; (in calling it pure line, I mean that there are no mixtures of mezzotint or any mechanical tooling, but all is steady hand-work,) from a picture by Mr. Armytage, which, without possessing any of the highest claims to admiration, is yet free from the vulgar vices which disgrace most of our popular religious art; and is so sweet in the fancy of it as to deserve, better than many works of higher power, the pains of the engraver to make it a common possession. It is meant to help us to imagine the evening of the day when the father and mother of Christ had been seeking him through Jerusalem: they have come to a well where women are drawing water; St. Joseph passes on,—but the tired Madonna, leaning on the well’s margin, asks wistfully of the women if they have seen such and such a child astray. Now will you just look for a while into the lines by which the expression of the weary and anxious face is rendered; see how unerring they are,—how calm and clear; and think how many questions have to be determined in drawing the most minute portion of any one,—its curve,—its thickness,—its distance from the next,—its own preparation for ending, invisibly, where it ends. Think what the precision must be in these that trace the edge of the lip, and make it look quivering with disappointment, or in these which have made the eyelash heavy with restrained tears.

117. Or if, as must be the case with many of my audience, it is impossible for you to conceive the difficulties here overcome, look merely at the draperies, and other varied substances represented in the plate; see how silk, and linen, and stone, and pottery, and flesh, are all separated in texture, and graduated in light, by the most subtle artifices and appliances of line,—of which artifices, and the nature of the mechanical

labour throughout, I must endeavour to give you to-day a more distinct conception than you are in the habit of forming. But as I shall have to blame some of these methods in their general result, and I do not wish any word of general blame to be associated with this most excellent and careful plate by Mr. Jeens, I will pass, for special examination, to one already in your reference series, which for the rest exhibits more various treatment in its combined landscape, background, and figures; the *Belle Jardinière* of Raphael, drawn and engraved by the Baron Desmoyers.

You see, in the first place, that the ground, stones, and other coarse surfaces are distinguished from the flesh and draperies by broken and wriggled lines. Those broken lines cannot be executed with the burin, they are etched in the early states of the plate, and are a modern artifice, never used by old engravers; partly because the older men were not masters of the art of etching, but chiefly because even those who were acquainted with it would not employ lines of this nature. They have been developed by the importance of landscape in modern engraving, and have produced some valuable results in small plates, especially of architecture. But they are entirely erroneous in principle, for the surface of stones and leaves is not broken or jagged in this manner, but consists of mossy, or blooming, or otherwise organic texture, which cannot be represented by these coarse lines; their general consequence has therefore been to withdraw the mind of the observer from all beautiful and tender characters in foreground, and eventually to destroy the very school of landscape engraving which gave birth to them.

Considered, however, as a means of relieving more delicate textures, they are in some degree legitimate, being, in fact, a kind of chasing or jaggling one part of the plate surface in order to throw out the delicate tints from the rough field. But the same effect was produced with less pains, and far more entertainment to the eye, by the older engravers, who employed purely ornamental variations of line; thus in Plate IV., opposite page 87, the drapery is sufficiently distinguished from the grass by the treatment of the latter as an

ornamental arabesque. The grain of wood is elaborately engraved by Marc Antonio, with the same purpose, in the plate given in your Standard Series.

118. Next, however, you observe what difference of texture and force exists between the smooth, continuous lines themselves, which are all really *engraved*. You must take some pains to understand the nature of this operation.

The line is first cut lightly through its whole course, by absolute decision and steadiness of hand, which you may endeavour to imitate if you like, in its simplest phase, by drawing a circle with your compass-pen; and then, grasping your penholder so that you can push the point like a plough, describing other circles inside or outside of it, in exact parallelism with the mathematical line, and at exactly equal distances. To approach, or depart, with your point at finely graduated intervals, may be your next exercise, if you find the first unexpectedly easy.

119. When the line is thus described in its proper course, it is ploughed deeper, where depth is needed, by a second cut of the burin, first on one side, and then on the other, the cut being given with graduated force so as to take away most steel where the line is to be darkest. Every line of graduated depth in the plate has to be thus cut eight or ten times over at least, with retouchings to smooth and clear all in the close. Jason has to plough his field ten-furrow deep, with his fiery oxen well in hand, all the while.

When the essential lines are thus produced, in their several directions, those which have been drawn across each other, so as to give depth of shade, or richness of texture, have to be farther enriched by dots in the interstices; else there would be a painful appearance of network everywhere; and these dots require each four or five jags to produce them; and each of these jags must be done with what artists and engravers alike call 'feeling,'—the sensibility, that is, of a hand completely under mental government. So wrought, the dots look soft, and like touches of paint; but mechanically dug in, they are vulgar and hard.

120. Now, observe, that, for every piece of shadow through-

out the work, the engraver has to decide with what quantity and kind of line he will produce it. Exactly the same quantity of black, and therefore the same depth of tint in general effect, may be given with six thick lines; or with twelve, of half their thickness; or with eighteen, of a third of the thickness. The second six, second twelve, or second eighteen, may cross the first six, first twelve, or first eighteen, or go between them; and they may cross at any angle. And then the third six may be put between the first six, or between the second six, or across both, and at any angle. In the net-work thus produced, any kind of dots may be put in the severally shaped interstices. And for any of the series of superadded lines, dots, of equivalent value in shade, may be substituted. (Some engravings are wrought in dots altogether.) Choice infinite, with multiplication of infinity, is, at all events, to be made, for every minute space, from one side of the plate to the other.

121. The excellence of a beautiful engraving is primarily in the use of these resources to exhibit the qualities of the original picture, with delight to the eye in the method of translation; and the language of engraving, when once you begin to understand it, is, in these respects, so fertile, so ingenious, so ineffably subtle and severe in its grammar, that you may quite easily make it the subject of your life's investigation, as you would the scholarship of a lovely literature.

But in doing this, you would withdraw, and necessarily withdraw, your attention from the higher qualities of art, precisely as a grammarian, who is that, and nothing more, loses command of the matter and substance of thought. And the exquisitely mysterious mechanisms of the engraver's method have, in fact, thus entangled the intelligence of the careful draughtsmen of Europe; so that since the final perfection of this translator's power, all the men of finest patience and finest hand have stayed content with it;—the subtlest draughtsmanship has perished from the canvas,* and sought

* An effort has lately been made in France, by Meissonier, Gérôme, and their school, to recover it, with marvellous collateral skill of engravers. The etching of Gérôme's Louis XVI. and Molière is one of the completest pieces of skilful mechanism ever put on metal.

more popular praise in this labyrinth of disciplined language, and more or less dulled or degraded thought. And, in sum, I know no cause more direct or fatal, in the destruction of the great schools of European art, than the perfectness of modern line engraving.

122. This great and profoundly to be regretted influence I will prove and illustrate to you on another occasion. My object to-day is to explain the perfectness of the art itself; and above all to request you, if you will not look at pictures instead of photographs, at least not to allow the cheap merits of the chemical operation to withdraw your interest from the splendid human labour of the engraver. Here is a little vignette from Stothard, for instance, in Rogers' poems, to the lines,

"Soared in the swing, half pleased and half afraid,
'Neath sister elms, that waved their summer shade."

You would think, would you not? (and rightly,) that of all difficult things to express with crossed black lines and dots, the face of a young girl must be the most difficult. Yet here you have the face of a bright girl, radiant in light, transparent, mysterious, almost breathing,—her dark hair involved in delicate wreath and shade, her eyes full of joy and sweet playfulness,—and all this done by the exquisite order and gradation of a very few lines, which, if you will examine them through a lens, you find dividing and chequering the lip, and cheek, and chin, so strongly that you would have fancied they could only produce the effect of a grim iron mask. But the intelligences of order and form guide them into beauty, and inflame them with delicatest life.

123. And do you see the size of this head? About as large as the bud of a forget-me-not! Can you imagine the fineness of the little pressures of the hand on the steel, in that space, which at the edge of the almost invisible lip, fashioned its less or more of smile.

My chemical friends, if you wish ever to know anything rightly concerning the arts, I very urgently advise you to throw all your vials and washes down the gutter-trap; and if you will ascribe, as you think it so clever to do, in your

modern creeds, all virtue to the sun, use that virtue through your own heads and fingers, and apply your solar energies to draw a skilful line or two, for once or twice in your life. You may learn more by trying to engrave, like Goodall, the tip of an ear, or the curl of a lock of hair, than by photographing the entire population of the United States of America,—black, white, and neutral-tint.

And one word, by the way, touching the complaints I hear at my having set you to so fine work that it hurts your eyes. You have noticed that all great sculptors—and most of the great painters of Florence—began by being goldsmiths. Why, do you think the goldsmith's apprenticeship is so fruitful? Primarily, because it forces the boy to do small work, and mind what he is about. Do you suppose Michael Angelo learned his business by dashing or hitting at it? He laid the foundation of all his after power by doing precisely what I am requiring my own pupils to do,—copying German engravings in facsimile! And for your eyes—you all sit up at night till you haven't got any eyes worth speaking of. Go to bed at half-past nine, and get up at four, and you'll see something out of them, in time.

124. Nevertheless, whatever admiration you may be brought to feel, and with justice, for this lovely workmanship,—the more distinctly you comprehend its merits, the more distinctly also will the question rise in your mind, How is it that a performance so marvellous has yet taken no rank in the records of art of any permanent or acknowledged kind? How is it that these vignettes from Stothard and Turner,* like the

* I must again qualify the too sweeping statement of the text. I think, as time passes, some of these nineteenth century line engravings will become monumental. The first vignette of the garden, with the cut hedges and fountain, for instance, in Rogers' poems, is so consummate in its use of every possible artifice of delicate line, (note the look of *tremulous* atmosphere got by the undulatory etched lines on the pavement, and the broken masses, worked with dots, of the fountain foam,) that I think it cannot but, with some of its companions, survive the re-use of its school, and become classic. I find in like manner, even with all their faults and weaknesses, the vignettes to Heyne's Virgil to be real art-possession.

woodcuts from Tenniel, scarcely make the name of the engraver known ; and that they never are found side by side with this older and apparently ruder art, in the cabinets of men of real judgment. The reason is precisely the same as in the case of the Tenniel woodcut. This modern line engraving is alloyed gold. Rich in capacity, astonishing in attainment, it nevertheless admits wilful fault, and misses what it ought first to have attained. It is therefore, to a certain measure, vile in its perfection ; while the older work is noble even in its failure, and classic no less in what it deliberately refuses, than in what it rationally and rightly prefers and performs.

125. Here, for instance, I have enlarged the head of one of Durer's Madonnas for you out of one of his most careful plates.* You think it very ugly. Well, so it is. Don't be afraid to think so, nor to say so. Frightfully ugly ; vulgar also. It is the head, simply, of a fat Dutch girl, with all the pleasantness left out. There is not the least doubt about that. Don't let anybody force Albert Durer down your throats ; nor make you expect pretty things from him. Stot-hard's young girl in the swing, or Sir Joshua's Age of Innocence, are in quite angelic spheres of another world, compared to this black domain of poor, laborious Albert. We are not talking of female beauty, so please you, just now, gentlemen, but of engraving. And the merit, the classical, indefeasible, immortal merit of this head of a Dutch girl with all the beauty left out, is in the fact that every line of it, as engraving, is as good as can be ;—good, not with the mechanical dexterity of a watchmaker, but with the intellectual effort and sensitiveness of an artist who knows precisely what can be done, and ought to be attempted, with his assigned materials. He works easily, fearlessly, flexibly ; the dots are not all measured in distance ; the lines not all mathematically parallel or divergent. He has even missed his mark at the mouth in one place, and leaves the mistake, frankly. But there are no petrifed mistakes ; nor is the eye so accustomed to the look of

* Plate 11th, in the Appendix, taken from the engraving of the Virgin sitting in the fenced garden, with two angels crowning her.

the mechanical furrow as to accept it for final excellence. The engraving is full of the painter's higher power and wider perception ; it is classically perfect, because duly subordinate, and presenting for your applause only the virtues proper to its own sphere. Among these, I must now reiterate, the first of all is the *decorative* arrangement of *lines*.

126. You all know what a pretty thing a damask table-cloth is, and how a pattern is brought out by threads running one way in one space, and across in another. So, in lace, a certain delightfulness is given by the texture of meshed lines.

Similarly, on any surface of metal, the object of the engraver is, or ought to be, to cover it with lovely *lines*, forming a lacework, and including a variety of spaces, delicious to the eye.

And this is his business, primarily ; before any other matter can be thought of, his work must be ornamental. You know I told you a sculptor's business is first to cover a surface with pleasant *bosses*, whether they mean anything or not ; so an engraver's is to cover it with pleasant *lines* whether they mean anything or not. That they should mean something, and a good deal of something, is indeed desirable afterwards ; but first we must be ornamental.

127. Now if you will compare Plate II. at the beginning of this lecture, which is a characteristic example of good Florentine engraving, and represents the Planet and power of Aphrodite, with the Aphrodite of Bewick in the upper division of Plate I., you will at once understand the difference between a primarily ornamental, and a primarily realistic, style. The first requirement in the Florentine work, is that it shall be a lovely arrangement of lines ; a pretty thing upon a page. Bewick *has* a secondary notion of making his vignette a pretty thing upon a page. But he is overpowered by his vigorous veracity, and bent first on giving you his idea of Venus. Quite right, he would have been, mind you, if he had been carving a statue of her on Mount Eryx ; but not when he was engraving a vignette to Æsop's fables. To engrave well is to ornament a surface well, not to create a realistic impression. I beg your pardon for my repetitions ; but the point at issue is the



PLATE III.—AT EVENING, FROM THE TOP OF FÉSOLE.

root of the whole business, and I *must* get it well asserted, and variously.

Let me pass to a more important example.

128. Three years ago, in the rough first arrangement of the copies in the Educational Series, I put an outline of the top of Apollo's sceptre, which, in the catalogue, was said to be probably by Baccio Bandini of Florence, for your first real exercise; it remains so, the olive being put first only for its mythological rank.

The series of engravings to which the plate from which that exercise is copied belongs, are part of a number, executed chiefly, I think, from early designs of Sandro Botticelli, and some in great part by his hand. He and his assistant, Baccio, worked together; and in such harmony, that Bandini probably often does what Sandro wants, better than Sandro could have done it himself; and, on the other hand, there is no design of Bandini's over which Sandro does not seem to have had influence.

And wishing now to show you three examples of the finest work of the old, the renaissance, and the modern schools,—of the old, I will take Baccio Bandini's *Astrologia*, Plate III., opposite. Of the renaissance, Durer's *Adam and Eve*. And of the modern, this head of the daughter of Herodias, engraved from Luini by Beaugrand, which is as affectionately and sincerely wrought, though in the modern manner, as any plate of the old schools.

129. Now observe the progress of the feeling for light and shade in the three examples.

The first is nearly all white paper; you think of the outline as the constructive element throughout.

The second is a vigorous piece of *white* and *black*—not of *light* and *shade*,—for all the high lights are equally white, whether of flesh, or leaves, or goat's hair.

The third is complete in *chiaroscuro*, as far as engraving can be.

Now the dignity and virtue of the plates is in the exactly inverse ratio of their fulness in *chiaroscuro*.

Bandini's is excellent work, and of the very highest school.

Durer's entirely accomplished work, but of an inferior school. And Beaugrand's, excellent work, but of a vulgar and non-classical school.

And these relations of the schools are to be determined by the quality in the *lines*; we shall find that in proportion as the light and shade is neglected, the lines are studied; that those of Bandini are perfect; of Durer perfect, only with a lower perfection; but of Beaugrand, entirely faultful.

130. I have just explained to you that in modern engraving the lines are cut in clean furrow, widened, it may be, by successive cuts; but, whether it be fine or thick, retaining always, when printed, the aspect of a continuous line drawn with the pen, and entirely black throughout its whole course.

Now we may increase the delicacy of this line to any extent by simply printing it in grey colour instead of black. I obtained some very beautiful results of this kind in the later volumes of 'Modern Painters,' with Mr. Armytage's help, by using subdued purple tints; but, in any case, the line thus engraved must be monotonous in its character, and cannot be expressive of the finest qualities of form.

Accordingly, the old Florentine workmen constructed the line *itself*, in important places, of successive minute touches, so that it became a chain of delicate links which could be opened or closed at pleasure.* If you will examine through a lens the outline of the face of this Astrology, you will find it is traced with an exquisite series of minute touches, susceptible of accentuation or change absolutely at the engraver's pleasure; and, in result, corresponding to the finest conditions of a pencil line drawing by a consummate master. In the fine plates of this period, you have thus the united powers of the pen and pencil, and both absolutely secure and multipliable.

* The method was first developed in engraving designs on silver—numbers of lines being executed with dots by the punch, for variety's sake. For niello, and printing, a transverse cut was substituted for the blow. The entire style is connected with the later Roman and Byzantine method of drawing lines with the drill hole, in marble. See above, Lecture II., Section 70.

131. I am a little proud of having independently discovered, and had the patience to carry out, this Florentine method of execution for myself, when I was a boy of thirteen. My good drawing-master had given me some copies calculated to teach me freedom of hand ; the touches were rapid and vigorous,—many of them in mechanically regular zigzags, far beyond any capacity of mine to imitate in the bold way in which they were done. But I was resolved to have them, somehow ; and actually facsimilied a considerable portion of the drawing in the Florentine manner, with the finest point I could cut to my pencil, taking a quarter of an hour to forge out the likeness of one return in the zigzag which my master carried down through twenty returns in two seconds ; and so successfully, that he did not detect my artifice till I showed it him,—on which he forbade me ever to do the like again. And it was only thirty years afterwards that I found I had been quite right after all, and working like Baccio Bandini ! But the patience which carried me through that early effort, served me well through all the thirty years, and enabled me to analyze, and in a measure imitate, the method of work employed by every master ; so that, whether you believe me or not at first, you will find what I tell you of their superiority, or inferiority, to be true.

132. When lines are studied with this degree of care you may be sure the master will leave room enough for you to see them and enjoy them, and not use any at random. All the finest engravers, therefore, leave much white paper, and use their entire power on the outlines.

133. Next to them come the men of the Renaissance schools, headed by Durer, who, less careful of the beauty and refinement of the line, delight in its vigour, accuracy, and complexity. And the essential difference between these men and the moderns is that these central masters cut their line for the most part with a single furrow, giving it depth by force of hand or wrist, and retouching, *not in the furrow itself, but with others beside it.** Such work can only be done well on copper,

* This most important and distinctive character was pointed out to me by Mr. Burgess.

and it can display all faculty of hand or wrist, precision of eye, and accuracy of knowledge, which a human creature can possess. But the dotted or hatched line is not used in this central style, and the higher conditions of beauty never thought of.

In the Astrology of Bandini,—and remember that the Astrologia of the Florentine meant what we mean by Astronomy, and much more,—he wishes you first to look at the face : the lip half open, faltering in wonder ; the amazed, intense, dreaming gaze ; the pure dignity of forehead, undisturbed by terrestrial thought. None of these things could be so much as attempted in Durer's method ; he can engrave flowing hair, skin of animals, bark of trees, wreathings of metal-work, with the free hand ; also, with laboured chiaroscuro, or with sturdy line, he can reach expressions of sadness, or gloom, or pain, or soldierly strength,—but pure beauty,—never.

134. Lastly, you have the Modern school, deepening its lines in successive cuts. The instant consequence of the introduction of this method is the restriction of curvature ; you cannot follow a complex curve again with precision through its furrow. If you are a dextrous ploughman, you can drive your plough any number of times along the simple curve. But you cannot repeat again exactly the motions which cut a variable one.* You may retouch it, energize it, and deepen it in parts, but you cannot cut it all through again equally. And the retouching and energizing in parts is a living and intellectual process ; but the cutting all through, equally, a mechanical one. The difference is exactly such as that between the dexterity of turning out two similar mouldings from a lathe, and carving them with the free hand, like a Pisan sculptor. And although splendid intellect, and subtlest sensibility, have been spent on the production of some modern plates, the mechanical element introduced by their manner of execution always overpowers both ; nor *can any plate of consummate value ever be produced in the modern method.*

135. Nevertheless, in landscape, there are two examples in your Reference series, of insuperable skill and extreme beauty :

* This point will be further examined and explained in the Appendix.



PLATE IV.—“BY THE SPRINGS OF PARNASSUS.”

Miller's plate, before instanced, of the Grand Canal, Venice; and E. Goodall's of the upper fall of the Tees. The men who engraved these plates might have been exquisite artists; but their patience and enthusiasm were held captive in the false system of lines, and we lost the painters; while the engravings, wonderful as they are, are neither of them worth a Turner etching, scratched in ten minutes with the point of an old fork; and the common types of such elaborate engraving are none of them worth a single frog, pig, or puppy, out of the corner of a Bewick vignette.

136. And now, I think, you cannot fail to understand clearly what you are to look for in engraving, as a separate art from that of painting. Turn back to the 'Astrologia' as a perfect type of the purest school. She is gazing at stars, and crowned with them. But the stars are *black* instead of shining! You cannot have a more decisive and absolute proof that you must not look in engraving for chiaroscuro.

Nevertheless, her body is half in shade, and her left foot; and she casts a shadow, and there is a bar of shade behind her.

All these are merely so much acceptance of shade as may relieve the forms, and give value to the linear portions. The face, though turned from the light, is shadowless.

Again. Every lock of the hair is designed and set in its place with the subtlest care, but there is no lustre attempted,—no texture,—no mystery. The plumes of the wings are set studiously in their places,—they, also, lustreless. That even their filaments are not drawn, and that the broad curve embracing them ignores the anatomy of a bird's wing, are conditions of design, not execution. Of these in a future lecture.*

137. The 'Poesia,' Plate IV., opposite, is a still more severe, though not so generic, an example; its decorative foreground reducing it almost to the rank of Goldsmith's ornamentation. I need scarcely point out to you that the flowing water shows neither lustre nor reflection; but notice that the observer's attention is supposed to be so close to every dark touch of the

* See Appendix, Article I.

graver that he will see the minute dark spots which indicate the sprinkled shower falling from the vase into the pool.

138. This habit of strict and calm attention, constant in the artist, and expected in the observer, makes all the difference between the art of Intellect, and of mere sensation. For every detail of this plate has a meaning, if you care to understand it. This is Poetry, sitting by the fountain of Castalia, which flows first out of a formal urn, to show that it is not artless; but the rocks of Parnassus are behind, and on the top of them—only one tree, like a mushroom with a thick stalk. You at first are inclined to say, How very absurd, to put only one tree on Parnassus! but this one tree is the Immortal Plane Tree, planted by Agamemnon, and at once connects our Poesia with the *Iliad*. Then, this is the hem of the robe of Poetry,—this is the divine vegetation which springs up under her feet,—this is the heaven and earth united by her power,—this is the fountain of Castalia flowing out afresh among the grass,—and these are the drops with which, out of a pitcher, Poetry is nourishing the fountain of Castalia.

All which you may find out if you happen to know anything about Castalia, or about poetry; and pleasantly think more upon, for yourself. But the poor dunces, Sandro and Baccio, feeling themselves but ‘*goffi nell’ arte*,’ have no hope of telling you all this, except suggestively. They can’t engrave grass of Parnassus, nor sweet springs so as to look like water; but they can make a pretty damasked surface with ornamental leaves, and flowing lines, and so leave you something to think of—if you will.

139. ‘But a great many people won’t, and a great many more can’t; and surely the finished engravings are much more delightful, and the only means we have of giving any idea of finished pictures, out of our reach.’

Yes, all that is true; and when we examine the effects of line engraving upon taste in recent art, we will discuss these matters; for the present, let us be content with knowing what the best work is, and why it is so. Although, however, I do not now press further my cavils at the triumph of modern line engraving, I must assign to you, in few words, the

reason of its recent decline. Engravers complain that photography and cheap woodcutting have ended their finer craft. No complaint can be less grounded. They themselves destroyed their own craft, by vulgarizing it. Content in their beautiful mechanism, they ceased to learn, and to feel, as artists; they put themselves under the order of publishers and printsellers; they worked indiscriminately from whatever was put into their hands,—from Bartlett as willingly as from Turner, and from Mulready as carefully as from Raphael. They filled the windows of printsellers, the pages of gift books, with elaborate rubbish, and piteous abortions of delicate industry. They worked cheap, and cheaper,—smoothly, and more smoothly,—they got armies of assistants, and surrounded themselves with schools of mechanical tricksters, learning their stale tricks with blundering avidity. They had fallen—before the days of photography—into providers of frontispieces for housekeepers' pocket-books. I do not know if photography itself, their redoubted enemy, has even now ousted them from that last refuge.

140. Such the fault of the engraver,—very pardonable; scarcely avoidable,—however fatal. Fault mainly of humility. But what has *your* fault been, gentlemen? what the patrons' fault, who have permitted so wide waste of admirable labour, so pathetic a uselessness of obedient genius? It was yours to have directed, yours to have raised and rejoiced in, the skill, the modesty, the patience of this entirely gentle and industrious race;—copyists with their *heart*. The common painter-copyists who encumber our European galleries with their easels and pots, are, almost without exception, persons too stupid to be painters, and too lazy to be engravers. The real copyists—the men who can put their soul into another's work—are employed at home, in their narrow rooms, striving to make their good work profitable to all men. And in their submission to the public taste they are truly national servants as much as Prime Ministers are. They fulfil the demand of the nation; what, as a people, you wish to have for possession in art, these men are ready to give you.

And what have you hitherto asked of them?—Ramsgate

Sands, and Dolly Vardens, and the Paddington Station,—these, I think, are typical of your chief demands ; the cartoons of Raphael—which you don't care to see themselves ; and, by way of a flight into the empyrean, the Madonna di San Sisto. And, literally, there are hundreds of cities and villages in Italy in which roof and wall are blazoned with the noblest divinity and philosophy ever imagined by men ; and of all this treasure, I can, as far as I know, give you not *one* example, in line engraving, by an English hand !

Well, you are in the main matter right in this. You want essentially Ramsgate Sands and the Paddington Station, because there you can see yourselves.

Make yourselves, then, worthy to be seen for ever, and let English engraving become noble as the record of English loveliness and honour.

LECTURE V.

DESIGN IN THE GERMAN SCHOOLS OF ENGRAVING.

141. By reference to the close of the preface to 'Eagle's Nest,' you will see, gentlemen, that I meant these lectures, from the first, rather to lead you to the study of the characters of two great men, than to interest you in the processes of a secondary form of art. As I draw my materials into the limited form necessary for the hour, I find my divided purpose doubly failing ; and would fain rather use my time to-day in supplying the defects of my last lecture, than in opening the greater subject, which I must treat with still more lamentable inadequacy. Nevertheless, you must not think it is for want of time that I omit reference to other celebrated engravers, and insist on the special power of these two only. Many not inconsiderable reputations are founded merely on the curiosity of collectors of prints, or on partial skill in the management of processes ; others, though resting on more secure bases, are still of no importance to you in the general history of art ; whereas you will find the work of

Holbein and Botticelli determining for you, without need of any farther range, the principal questions of moment in the relation of the Northern and Southern schools of design. Nay, a wider method of inquiry would only render your comparison less accurate in result. It is only in Holbein's majestic range of capacity, and only in the particular phase of Teutonic life which his art adorned, that the problem can be dealt with on fair terms. We Northerners can advance no fairly comparable antagonist to the artists of the South, except at that one moment, and in that one man. Rubens cannot for an instant be matched with Tintoret, nor Memling with Lippi; while Reynolds only rivals Titian in what he learned from him. But in Holbein and Botticelli we have two men trained independently, equal in power of intellect, similiar in material and mode of work, contemporary in age, correspondent in disposition. The relation between them is strictly typical of the constant aspects to each other of the Northern and Southern schools.

142. Their point of closest contact is in the art of engraving, and this art is developed entirely as the servant of the great passions which perturbed or polluted Europe in the fifteenth century. The impulses which it obeys are all new; and it obeys them with its own nascent plasticity of temper. Painting and sculpture are only modified by them; but engraving is educated.

These passions are in the main three; namely,

1. The thirst for classical literature, and the forms of proud and false tastes which arose out of it, in the position it had assumed as the enemy of Christianity.
2. The pride of science, enforcing (in the particular domain of Art) accuracy of perspective, shade, and anatomy, never before dreamed of.
3. The sense of error and iniquity in the theological teaching of the Christian Church, felt by the highest intellects of the time, and necessarily rendering the formerly submissive religious art impossible.

To-day, then, our task is to examine the peculiar characters of the Design of the Northern Schools of Engraving, as affected by these great influences.

143. I have not often, however, used the word 'design,' and must clearly define the sense in which I now use it. It is vaguely used in common art-parlance; often as if it meant merely the drawing of a picture, as distinct from its colour; and in other still more inaccurate ways. The accurate and proper sense, underlying all these, I must endeavour to make clear to you.

'Design' properly signifies that power in any art-work which has a purpose other than of imitation, and which is 'designed,' composed, or separated to that end. It implies the rejection of some things, and the insistence upon others, with a given object.*

Let us take progressive instances. Here is a group of prettily dressed peasant children, charmingly painted by a very able modern artist—not absolutely without design, for he really wishes to show you how pretty peasant children can be, (and, in so far, is wiser and kinder than Murillo, who likes to show how ugly they can be); also, his group is agreeably arranged, and its component children carefully chosen. Nevertheless, any summer's day, near any country village, you may come upon twenty groups in an hour as pretty as this;

* If you paint a bottle only to amuse the spectator by showing him how like a painting may be to a bottle, you cannot be considered, in art-philosophy, as a designer. But if you paint the cork flying out of the bottle, and the contents arriving in an arch at the mouth of a recipient glass, you are so far forth a designer or signer; probably meaning to express certain ultimate facts respecting, say, the hospitable disposition of the landlord of the house; but at all events representing the bottle and glass in a designed, and not merely natural, manner. Not merely natural—nay, in some sense non-natural, or supernatural. And all great artists show both this fantastic condition of mind in their work, and show that it has arisen out of a communicative or didactic purpose.

They are the Sign-painters of God.

I have added this note to the lecture in copying my memoranda of it here at Assisi, June 9th, being about to begin work in the Tavern, or Tabernaculum, of the Lower Church, with its variously significant four great 'signs.'

and may see—if you have eyes—children in them twenty times prettier than these. A photograph, if it could render them perfectly, and in colour, would far excel the charm of this painting; for in it, good and clever as it is, there is nothing supernatural, and much that is sub-natural.

144. Beside this group of, in every sense of the word, ‘artless’ little country girls, I will now set one—in the best sense of the word—‘artful’ little country girl,—a sketch by Gainsborough.

You never saw her like before. Never will again, now that Gainsborough is dead. No photography,—no science,—no industry, will touch or reach for an instant this *super-naturalness*. You will look vainly through the summer fields for such a child. “Nor up the lawn, nor by the wood,” is she. Whence do you think this marvellous charm has come? Alas! if we knew, would not we all be Gainsboroughs? This only you may practically ascertain, as surely as that a flower will die if you cut its root away, that you cannot alter a single touch in Gainsborough’s work without injury to the whole. Half a dozen spots, more or less, in the printed gowns of these other children whom I first showed you, will not make the smallest difference to them; nor a lock or two more or less in their hair, nor a dimple or two more or less in their cheeks. But if you alter one wave of the hair of Gainsborough’s girl, the child is gone. Yet the art is so subtle, that I do not expect you to believe this. It looks so instinctive, so easy, so ‘chanceux,’—the French word is better than ours. Yes, and in their more accurate sense, also, ‘Il a de la chance.’ A stronger Designer than he was with him. He could not tell you himself how the thing was done.

145. I proceed to take a more definite instance—this Greek head of the Lacinian Juno. The design or appointing of the forms now entirely prevails over the resemblance to Nature. No real hair could ever be drifted into these wild lines, which mean the wrath of the Adriatic winds round the Cape of Storms.

And yet, whether this be uglier or prettier than Gainsborough’s child—(and you know already what *I* think about

it, that no Greek goddess was ever half so pretty as an English girl, of pure clay and temper,)—uglier or prettier, it is more dignified and impressive. It at least belongs to the domain of a lordlier, more majestic, more guiding, and ordaining art.

146. I will go back another five hundred years, and place an Egyptian beside the Greek divinity. The resemblance to Nature is now all but lost, the ruling law has become all. The lines are reduced to an easily counted number, and their arrangement is little more than a decorative sequence of pleasant curves cut in porphyry,—in the upper part of their contour following the outline of a woman's face in profile, over-crested by that of a hawk, on a kind of pedestal. But that the sign-engraver meant by his hawk, Immortality, and by her pedestal, the House or Tavern of Truth, is of little importance now to the passing traveller, not yet preparing to take the sarcophagus for his place of rest.

147. How many questions are suggested to us by these transitions! Is beauty contrary to law, and grace attainable only through license? What we gain in language, shall we lose in thought? and in what we add of labour, more and more forget its ends?

Not so.

Look at this piece of Sandro's work, the Libyan Sibyl.*

It is as ordered and normal as the Egyptian's;—as graceful and facile as Gainsborough's. It retains the majesty of old religion; it is invested with the joy of newly-awakened childhood.

Mind, I do not expect you—do not wish you—to enjoy Botticelli's dark engraving as much as Gainsborough's aerial sketch; for due comparison of the men, painting should be put beside painting. But there is enough even in this copy of the Florentine plate to show you the junction of the two powers in it—of prophecy, and delight.

148. Will these two powers, do you suppose, be united in the same manner in the contemporary Northern art? That Northern school is my subject to-day; and yet I give you, as

* Plate X., Lecture VI.

type of the intermediate condition between Egypt and England—not Holbein, but Botticelli. I am obliged to do this; because in the Southern art, the religious temper remains unconquered by the doctrines of the Reformation. Botticelli was—what Luther wished to be, but could not be—a reformer still believing in the Church: his mind is at peace; and his art, therefore, can pursue the delight of beauty, and yet remain prophetic. But it was far otherwise in Germany. There the Reformation of manners became the destruction of faith; and art therefore, not a prophecy, but a protest. It is the chief work of the greatest Protestant who ever lived,* which I ask you to study with me to-day.

149. I said that the power of engraving had developed itself during the introduction of three new—(practically and vitally new, that is to say)—elements, into the minds of men: elements which briefly may be expressed thus:

1. Classicism, and Literary Science.
2. Medicine, and Physical Science.†
3. Reformation, and Religious Science.

And first of Classicism.

You feel, do not you, in this typical work of Gainsborough's, that his subject as well as his picture is 'artless' in a lovely sense;—nay, not only artless, but ignorant, and unscientific, in a beautiful way? You would be afterwards remorseful, I think, and angry with yourself—seeing the effect produced on her face—if you were to ask this little lady

* I do not mean the greatest teacher of reformed faith; but the greatest protestant against faith unreformed.

† It has become the permitted fashion among modern mathematicians, chemists, and apothecaries, to call themselves 'scientific men,' as opposed to theologians, poets, and artists. They know their sphere to be a separate one; but their ridiculous notion of its being a peculiarly scientific one ought not to be allowed in our Universities. There is a science of Morals, a science of History, a science of Grammar, a science of Music, and a science of Painting; and all these are quite beyond comparison higher fields for human intellect, and require accuracies of intenser observation, than either chemistry, electricity, or geology.

to spell a very long word? Also, if you wished to know how many times the sevens go in forty-nine, you would perhaps wisely address yourself elsewhere. On the other hand, you do not doubt that *this* lady* knows very well how many times the sevens go in forty-nine, and is more Mistress of Arts than any of us are Masters of them.

150. You have then, in the one case, a beautiful simplicity, and a blameless ignorance; in the other, a beautiful artfulness, and a wisdom which you do not dread,—or, at least, even though dreading, love. But you know also that we may remain in a hateful and culpable ignorance; and, as I fear too many of us in competitive effort feel, become possessed of a hateful knowledge.

Ignorance, therefore, is not evil absolutely; but, innocent, may be loveable.

Knowledge also is not good absolutely; but, guilty, may be hateful.

So, therefore, when I now repeat my former statement, that the first main opposition between the Northern and Southern schools is in the simplicity of the one, and the scholarship of the other, that statement may imply sometimes the superiority of the North, and sometimes of the South. You may have a heavenly simplicity opposed to a hellish (that is to say, a lustful and arrogant) scholarship; or you may have a barbarous and presumptuous ignorance opposed to a divine and disciplined wisdom. Ignorance opposed to learning in both cases; but evil to good, as the case may be.

151. For instance: the last time I was standing before Raphael's arabesques in the Loggias of the Vatican, I wrote down in my pocket-book the description, or, more modestly speaking, the inventory, of the small portion of that infinite wilderness of sensual fantasy which happened to be opposite me. It consisted of a woman's face, with serpents for hair, and a virgin's breasts, with stumps for arms, ending in blue butterflies' wings, the whole changing at the waist into a goat's body, which ended below in an obelisk upside-down, to the apex at

* The Cumæan Sibyl, Plate VII., Lecture VI.

the bottom of which were appended, by graceful chains, an altar, and two bunches of grapes.

Now you know in a moment, by a glance at this 'design'—beautifully struck with free hand, and richly gradated in colour,—that the master was familiar with a vast range of art and literature : that he knew all about Egyptian sphinxes, and Greek Gorgons ; about Egyptian obelisks, and Hebrew altars ; about Hermes, and Venus, and Bacchus, and satyrs, and goats, and grapes.

You know also—or ought to know, in an instant,—that all this learning has done him no good ; that he had better have known nothing than any of these things, since they were to be used by him only to such purpose ; and that his delight in armless breasts, legless trunks, and obelisks upside-down, has been the last effort of his expiring sensation, in the grasp of corrupt and altogether victorious Death. And you have thus, in Gainsborough as compared with Raphael, a sweet, sacred, and living simplicity, set against an impure, profane, and paralyzed knowledge.

152. But, next, let us consider the reverse conditions.

Let us take instance of contrast between faultful and treacherous ignorance, and divinely pure and fruitful knowledge.

In the place of honour at the end of one of the rooms of your Royal Academy—years ago—stood a picture by an English Academician, announced as a representation of Moses sustained by Aaron and Hur, during the discomfiture of Amalek. In the entire range of the Pentateuch, there is no other scene (in which the visible agents are mortal only) requiring so much knowledge and thought to reach even a distant approximation to the probabilities of the fact. One saw in a moment that the painter was both powerful and simple, after a sort ; that he had really sought for a vital conception, and had originally and earnestly read his text, and formed his conception. And one saw also in a moment that he had chanced upon this subject, in reading or hearing his Bible, as he might have chanced on a dramatic scene accidentally in the street. That he knew nothing of the character of Moses,—nothing of his

law,—nothing of the character of Aaron, nor of the nature of a priesthood,—nothing of the meaning of the event which he was endeavouring to represent, of the temper in which it would have been transacted by its agents, or of its relations to modern life.

153. On the contrary, in the fresco of the earlier scenes in the life of Moses, by Sandro Botticelli, you know—not ‘in a moment,’ for the knowledge of knowledge cannot be so obtained; but in proportion to the discretion of your own reading, and to the care you give to the picture, you *may* know,—that here is a sacredly guided and guarded learning; here a Master indeed, at whose feet you may sit safely, who can teach you, better than in words, the significance of both Moses’ law and Aaron’s ministry; and not only these, but, if he chose, could add to this an exposition as complete of the highest philosophies both of the Greek nation, and of his own; and could as easily have painted, had it been asked of him, Draco, or Numa, or Justinian, as the herdsman of Jethro.

154. It is rarely that we can point to an opposition between faultful, because insolent, ignorance, and virtuous, because gracious, knowledge, so direct, and in so parallel elements, as in this instance. In general, the analysis is much more complex. It is intensely difficult to indicate the mischief of involuntary and modest ignorance, calamitous only in a measure; fruitful in its lower field, yet sorrowfully condemned to that lower field—not by sin, but fate.

When first I introduced you to Bewick, we closed our too partial estimate of his entirely magnificent powers with one sorrowful concession—he could draw a pig, but not a Venus.

Eminently he could so, because—which is still more sorrowfully to be conceded—he liked the pig best. I have put now in your educational series a whole galaxy of pigs by him; but, hunting all the fables through, I find only one Venus, and I think you will all admit that she is an unsatisfactory Venus.* There is honest simplicity here; but you regret it; you miss something that you find in Holbein, much more in

* Lecture III., p. 57.

Botticelli. You see in a moment that this man knows nothing of Sphinxes, or Muses, or Graces, or Aphrodites; and, besides, that, knowing nothing, he would have no liking for them even if he saw them; but much prefers the style of a well-to-do English housekeeper with corkscrew curls, and a portly person.

155. You miss something, I said, in Bewick which you find in Holbein. But do you suppose Holbein himself, or any other Northern painter, could wholly quit himself of the like accusations? I told you, in the second of these lectures, that the Northern temper, refined from savageness, and the Southern, redeemed from decay, met, in Florence. Holbein and Botticelli are the purest types of the two races. Holbein is a civilized boor; Botticelli a reanimate Greek. Holbein was polished by companionship with scholars and kings, but remains always a burgher of Augsburg in essential nature. Bewick and he are alike in temper; only the one is untaught, the other perfectly taught. But Botticelli *needs* no teaching. He is, by his birth, scholar and gentleman to the heart's core. Christianity itself can only inspire him, not refine him. He is as tried gold chased by the jeweller,—the roughest part of him is the outside.

Now how differently must the newly recovered scholastic learning tell upon these two men. It is all out of Holbein's way; foreign to his nature, useless at the best, probably cumbersome. But Botticelli receives it as a child in later years recovers the forgotten dearness of a nursery tale; and is more himself, and again and again himself, as he breathes the air of Greece, and hears, in his own Italy, the lost voice of the Sibyl murmur again by the Avernus Lake.

156. It is not, as we have seen, every one of the Southern race who can thus receive it. But it graces them all; is at once a part of their being; destroys them, if it is to destroy, the more utterly because it so enters into their natures. It destroys Raphael; but it graces him, and is a part of him. It all but destroys Mantegna; but it graces him. And it does not hurt Holbein, just because it does *not* grace him—never is for an instant a part of him. It is with Raphael as

with some charming young girl who has a new and beautifully made dress brought to her, which entirely becomes her,—so much, that in a little while, thinking of nothing else, she becomes *it*; and is only the decoration of her dress. But with Holbein it is as if you brought the same dress to a stout farmer's daughter who was going to dine at the Hall; and begged her to put it on that she might not discredit the company. She puts it on to please you; looks entirely ridiculous in it, but is not spoiled by it,—remains herself, in spite of it.

157. You probably have never noticed the extreme awkwardness of Holbein in wearing this new dress; you would the less do so because his own people think him all the finer for it, as the farmer's wife would probably think her daughter. Dr. Woltmann, for instance, is enthusiastic in praise of the splendid architecture in the background of his Annunciation. A fine mess it must have made in the minds of simple German maidens, in their notion of the Virgin at home! I cannot show you this Annunciation; but I have under my hand one of Holbein's Bible cuts, of the deepest seriousness and import—his illustration of the Canticles, showing the Church as the bride of Christ.



You could not find a subject requiring more tenderness, purity, or dignity of treatment. In this maid, symbolizing the Church, you ask for the most passionate humility, the most angelic beauty: "Behold, thou art fair, my dove." Now here is Holbein's ideal of that fairness; here is his "Church as the Bride."

I am sorry to associate this figure in your minds, even for a moment, with the passages it is supposed to illustrate; but the lesson is too important to be omitted. Remember, Holbein represents the temper of Northern Reformation. He has all the nobleness of that temper, but also all its baseness. He represents, indeed, the



PLATE V.—HEAT CONSIDERED AS A MODE OF MOTION.
Florentine Natural Philosophy.

revolt of German truth against Italian lies ; but he represents also the revolt of German animalism against Hebrew imagination. This figure of Holbein's is half-way from Solomon's mystic bride, to Rembrandt's wife, sitting on his knee while he drinks.

But the key of the question is not in this. Florentine animalism has at this time, also, enough to say for itself. But Florentine animalism, at this time, feels the joy of a gentleman, not of a churl. And a Florentine, whatever he does,—be it virtuous or sinful, chaste or lascivious, severe or extravagant,—does it with a grace.

158. You think, perhaps, that Holbein's Solomon's bride is so ungraceful chiefly because she is overdressed, and has too many feathers and jewels. No ; a Florentine would have put any quantity of feathers and jewels on her, and yet never lost her grace. You shall see him do it, and that to a fantastic degree, for I have an example under my hand. Look back, first, to Bewick's Venus (Lect. III., p. 57). You can't accuse her of being overdressed. She complies with every received modern principle of taste. Sir Joshua's precept that drapery should be "drapery, and nothing more," is observed more strictly even by Bewick than by Michael Angelo. If the absence of decoration could exalt the beauty of his Venus, here had been her perfection.

Now look back to Plate II. (Lect. IV.), by Sandro ; Venus in her planet, the ruling star of Florence. Anything more grotesque in conception, more unrestrained in fancy of ornament, you cannot find, even in the final days of the Renaissance. Yet Venus holds her divinity through all ; she will become majestic to you as you gaze ; and there is not a line of her chariot wheels, of her buskins, or of her throne, which you may not see was engraved by a gentleman.

159. Again, Plate V., opposite, is a facsimile of another engraving of the same series—the Sun in Leo. It is even more extravagant in accessories than the Venus. You see the Sun's epaulettes before you see the sun ; the spiral scrolls of his chariot, and the black twisted rays of it, might, so far as types of form only are considered, be a design for some

modern court-dress star, to be made in diamonds. And yet all this wild ornamentation is, if you will examine it, more purely Greek in spirit than the Apollo Belvidere.

You know I have told you, again and again, that the soul of Greece is her veracity ; that what to other nations were fables and symbolisms, to her became living facts—living gods. The fall of Greece was instant when her gods again became fables. The Apollo Belvidere is the work of a sculptor to whom Apollonism is merely an elegant idea on which to exhibit his own skill. He does not himself feel for an instant that the handsome man in the unintelligible attitude,* with drapery hung over his left arm, as it would be hung to dry over a clothes-line, is the Power of the Sun. But the Florentine believes in Apollo with his whole mind, and is trying to explain his strength in every touch.

For instance ; I said just now, “ You see the sun’s epaulettes before the sun.” Well, *don’t* you, usually, as it rises ? Do you not continually mistake a luminous cloud for it, or wonder where it is, behind one ? Again, the face of the Apollo Belvidere is agitated by anxiety, passion, and pride. Is the sun’s likely to be so, rising on the evil and the good ? This Prince sits crowned and calm : look at the quiet fingers of the hand holding the sceptre,—at the restraint of the reins merely by a depression of the wrist.

160. You have to look carefully for those fingers holding the sceptre, because the hand—which a great anatomist would have made so exclusively interesting—is here confused with the ornamentation of the arm of the chariot on which it rests. But look what the ornamentation is ;—fruit and leaves, abundant, in the mouth of a cornucopia. A quite vulgar and meaningless ornament in ordinary renaissance work. Is it so

* I read somewhere, lately, a new and very ingenious theory about the attitude of the Apollo Belvidere, proving, to the author’s satisfaction, that the received notion about watching the arrow was all a mistake. The paper proved, at all events, one thing—namely, the statement in the text. For an attitude which has been always hitherto taken to mean one thing, and is plausibly asserted now to mean another, must be in itself unintelligible.

here, think you? Are not the leaves and fruits of earth in the Sun's hand? *

You thought, perhaps, when I spoke just now of the action of the right hand, that less than a depression of the wrist would stop horses such as those. You fancy Botticelli drew them so, because he had never seen a horse; or because, able to draw fingers, he could not draw hoofs! How fine it would be to have, instead, a prancing four-in-hand, in the style of Piccadilly on the Derby-day, or at least horses like the real Greek horses of the Parthenon!

Yes; and if they had had real ground to trot on, the Florentine would have shown you he knew how they should trot. But these have to make their way up the hillside of other lands. Look to the example in your standard series, Hermes Eriophoros. You will find his motion among clouds represented precisely in this labouring, failing, half-kneeling attitude of limb. These forms, toiling up through the rippled sands of heaven, are—not horses;—they are clouds themselves, *like* horses, but only a little like. Look how their hoofs lose themselves, buried in the ripples of cloud; it makes one think of the quicksands of Morecambe Bay.

And their tails—what extraordinary tufts of tails, ending in points! Yes; but do you not see, nearly joining with them, what is not a horse tail at all; but a flame of fire, kindled at Apollo's knee? All the rest of the radiance about him shoots *from* him. But this is rendered *up* to him. As the fruits of the earth are in one of his hands, its fire is in the other. And all the warmth, as well as all the light of it, are his.

We had a little natural philosophy, gentlemen, as well as theology, in Florence, once upon a time.

161. Natural philosophy, and also natural art, for in this the Greek reanimate was a nobler creature than the Greek who had died. His art had a wider force and warmer glow. I have told you that the first Greeks were distinguished from the barbarians by their simple humanity; the second Greeks—these Florentine Greeks reanimate—are human more strong-

* It may be asked, why not corn also? Because that belongs to Ceres, who is equally one of the great gods.

ly, more deeply, leaping from the Byzantine death at the call of Christ, "Loose him, and let him go." And there is upon them at once the joy of resurrection, and the solemnity of the grave.

162. Of this resurrection of the Greek, and the form of the tomb he had been buried in "those four days," I have to give you some account in the last lecture. I will only to-day show you an illustration of it which brings us back to our immediate question as to the reasons why Northern art could not accept classicism. When, in the closing lecture of Aratra Pentelici, I compared Florentine with Greek work, it was to point out to you the eager passions of the first as opposed to the formal legalism and proprieties of the other. Greek work, I told you, while truthful, was also restrained, and never but under majesty of law; while Gothic work was true, in the perfect law of Liberty or Franchise. And now I give you in facsimile (Plate VI.) the two Aphrodites thus compared—the Aphrodite Thalassia of the Tyrrhene seas, and the Aphrodite Urania of the Greek skies. You may not at first like the Tuscan best; and why she is the best, though both are noble, again I must defer explaining to next lecture. But now turn back to Bewick's Venus, and compare her with the Tuscan Venus of the Stars, (Plate II.); and then here, in Plate VI., with the Tuscan Venus of the Seas, and the Greek Venus of the Sky. Why is the English one vulgar? What is it, in the three others, which makes them, if not beautiful, at least refined?—every one of them 'designed' and drawn, indisputably, by a gentleman?

I never have been so puzzled by any subject of analysis as, for these ten years, I have been by this. Every answer I give, however plausible it seems at first, fails in some way, or in some cases. But there is the point for you, more definitely put, I think, than in any of my former books;—at present, for want of time, I must leave it to your own thoughts.

163. II. The second influence under which engraving developed itself, I said, was that of medicine and the physical sciences. Gentlemen, the most audacious, and the most valuable, statement which I have yet made to you on the sub-



PLATE VI.—FAIRNESS OF THE SEA AND AIR.

In Venice and Athens.

ject of practical art, in these rooms, is that of the evil resulting from the study of anatomy. It is a statement so audacious, that not only for some time I dared not make it to you, but for ten years, at least, I dared not make it to myself. I saw, indeed, that whoever studied anatomy was in a measure injured by it; but I kept attributing the mischief to secondary causes. It *can't* be this drink itself that poisons them, I said always. This drink is medicinal and strengthening: I see that it kills them, but it must be because they drink it cold when they have been hot, or they take something else with it that changes it into poison. The drink itself *must* be good. Well, gentlemen, I found out the drink itself to be poison at last, by the breaking of my choicest Venice glass. I could not make out what it was that had killed Tintoret, and laid it long to the charge of chiaroscuro. It was only after my thorough study of his Paradise, in 1870, that I gave up this idea, finding the chiaroscuro, which I had thought exaggerated was, in all original and undarkened passages, beautiful and most precious. And then at last I got hold of the true clue: "Il disegno di Michel Agnolo." And the moment I had dared to accuse that, it explained everything; and I saw that the betraying demons of Italian art, led on by Michael Angelo, had been, not pleasure, but knowledge; not indolence, but ambition; and not love, but horror.

164. But when first I ventured to tell you this, I did not know, myself, the fact of all most conclusive for its confirmation. It will take me a little while to put it before you in its total force, and I must first ask your attention to a minor point. In one of the smaller rooms of the Munich Gallery is Holbein's painting of St. Margaret and St. Elizabeth of Hungary,—standard of his early religious work. Here is a photograph from the St. Elizabeth; and, in the same frame, a French lithograph of it. I consider it one of the most important pieces of comparison I have arranged for you, showing you at a glance the difference between true and false sentiment. Of that difference, generally, we cannot speak to-day, but one special result of it you are to observe;—the omission, in the French drawing, of Holbein's daring representation of

disease, which is one of the vital honours of the picture. Quite one of the chief strengths of St. Elizabeth, in the Roman Catholic view, was in the courage of her dealing with disease, chiefly leprosy. Now observe, I say *Roman Catholic* view, very earnestly just now ; I am not at all sure that it is so in a Catholic view—that is to say, in an eternally Christian and Divine view. And this doubt, very nearly now a certainty, only came clearly into my mind the other day after many and many a year's meditation on it. I had read with great reverence all the beautiful stories about Christ's appearing as a leper, and the like ; and had often pitied and rebuked myself alternately for my intense dislike and horror of disease. I am writing at this moment within fifty yards of the grave of St. Francis, and the story of the likeness of his feelings to mine had a little comforted me, and the tradition of his conquest of them again humiliated me ; and I was thinking very gravely of this, and of the parallel instance of Bishop Hugo of Lincoln, always desiring to do service to the dead, as opposed to my own unmitigated and Louis-Quinze-like horror of funerals ;—when by chance, in the cathedral of Palermo, a new light was thrown for me on the whole matter.

165. I was drawing the tomb of Frederick II., which is shut off by a grating from the body of the church ; and I had, in general, quite an unusual degree of quiet and comfort at my work. But sometimes it was paralyzed by the unconscious interference of one of the men employed in some minor domestic services about the church. When he had nothing to do, he used to come and seat himself near my grating, not to look at my work, (the poor wretch had no eyes, to speak of,) nor in any way meaning to be troublesome ; but there was his habitual seat. His nose had been carried off by the most loathsome of diseases ; there were two vivid circles of scarlet round his eyes ; and as he sat, he announced his presence every quarter of a minute (if otherwise I could have forgotten it) by a peculiarly disgusting, loud, and long expectoration. On the second or third day, just as I had forced myself into some forgetfulness of him, and was hard at my work, I was startled from it again by the bursting out of a loud and

cheerful conversation close to me ; and on looking round, saw a lively young fledgling of a priest, seventeen or eighteen years old, in the most eager and spirited chat with the man in the chair. He talked, laughed, and spat, himself, companionably, in the merriest way, for a quarter of an hour ; evidently without feeling the slightest disgust, or being made serious for an instant, by the aspect of the destroyed creature before him.

166. His own face was simply that of the ordinary vulgar type of thoughtless young Italians, rather beneath than above the usual standard ; and I was certain, as I watched him, that he was not at all my superior, but very much my inferior, in the coolness with which he beheld what was to me so dreadful. I was positive that he could look this man in the face, precisely because he could *not* look, discerningly, at any beautiful or noble thing ; and that the reason I dared not, was because I had, spiritually, as much better eyes than the priest, as bodily, than his companion.

Having got so much of clear evidence given me on the matter, it was driven home for me a week later, as I landed on the quay of Naples. Almost the first thing that presented itself to me was the sign of a travelling theatrical company, displaying the principal scene of the drama to be enacted on their classical stage. Fresh from the theatre of Taormina, I was curious to see the subject of the Neapolitan popular drama. It was the capture, by the police, of a man and his wife who lived by boiling children. One section of the police was coming in, armed to the teeth, through the passage ; another section of the police, armed to the teeth, and with high feathers in its caps, was coming up through a trap-door. In fine dramatic unconsciousness to the last moment, like the clown in a pantomime, the child-boiler was represented as still industriously chopping up a child, pieces of which, ready for the pot, lay here and there on the table in the middle of the picture. The child-boiler's wife, however, just as she was taking the top off the pot to put the meat in, had caught a glimpse of the foremost policeman, and stopped, as much in rage as in consternation.

167. Now it is precisely the same feeling, or want of feeling, in the lower Italian (nor always in the lower classes only) which makes him demand the kind of subject for his secular drama ; and the Crucifixion and Pieta for his religious drama. The only part of Christianity he can enjoy is its horror ; and even the saint or saintess are not always denying themselves severely, either by the contemplation of torture, or the companionship with disease.

Nevertheless, we must be cautious, on the other hand, to allow full value to the endurance, by tender and delicate persons, of what is really loathsome or distressful to them in the service of others ; and I think this picture of Holbein's indicative of the exact balance and rightness of his own mind in this matter, and therefore of his power to conceive a true saint also. He had to represent St. Catherine's chief effort ;—he paints her ministering to the sick, and, among them, is a leper ; and finding it thus his duty to paint leprosy, he courageously himself studies it from the life. Not to insist on its horror ; but to assert it, to the needful point of fact, which he does with medical accuracy.

Now here is just a case in which science, in a subordinate degree, is really required for a spiritual and moral purpose. And you find Holbein does not shrink from it even in this extreme case in which it is most painful.

168. If, therefore, you *do* find him in other cases not using it, you may be sure he knew it to be unnecessary.

Now it may be disputable whether in order to draw a living Madonna, one need to know how many ribs she has ; but it would have seemed indisputable that in order to draw a skeleton, one must know how many ribs *it* has. .

Holbein is par excellence the draughtsman of skeletons. His painted Dance of Death was, and his engraved Dance of Death is, principal of such things, without any comparison or denial. He draws skeleton after skeleton, in every possible gesture ; but never so much as counts their ribs ! He neither knows nor cares how many ribs a skeleton has. There are always enough to rattle.

Monstrous, you think, in impudence,—Holbein for his care-

lessness, and I for defending him ! Nay, I triumph in him ; nothing has ever more pleased me than this grand negligence. Nobody wants to know how many ribs a skeleton has, any more than how many bars a gridiron has, so long as the one can breathe, and the other broil ; and still less, when the breath and the fire are both out.

169. But is it only of the bones, think you, that Holbein is careless ? * Nay, incredible though it may seem to you,—but, to me, explanatory at once of much of his excellence,—he did not know anatomy at all ! I told you in my Preface, already quoted, Holbein studies the face first, the body secondarily ; but I had no idea, myself, how completely he had refused the venomous science of his day. I showed you a dead Christ of his, long ago. Can you match it with your academy drawings, think you ? And yet he did not, and would not, know anatomy. *He* would not ; but Durer would, and did :—went hotly into it—wrote books upon it, and upon ‘ proportions of the human body,’ etc., etc., and all your modern recipes for painting flesh. How did his studies prosper his art ?

People are always talking of his Knight and Death, and his Melancholia, as if those were his principal works. They are his characteristic ones, and show what he might have been, *without* his anatomy ; but they were mere bye-play compared to his Greater Fortune, and Adam and Eve. Look at these. Here is his full energy displayed ; here are both male and female forms drawn with perfect knowledge of their bones and muscles, and modes of action and digestion,—and I hope you are pleased.

But it is not anatomy only that Master Albert studies. He has a taste for optics also ; and knows all about refraction and reflection. What with his knowledge of the skull inside, and the vitreous lens outside, if any man in the world is to draw an eye, here’s the man to do it, surely ! With a hand which can give lessons to John Bellini, and a care which would fain do all so that it can’t be done better, and acquaintance with

* Or inventive ! See Woltmann, p. 267. “The shin-bone, or the lower part of the arm, exhibit only one bone, while the upper arm and thigh are often allowed the luxury of two” !

every crack in the cranium, and every humour in the lens,—if we can't draw an eye, we should just like to know who can! thinks Albert.

So having to engrave the portrait of Melancthon, instead of looking at Melancthon, as ignorant Holbein would have been obliged to do,—wise Albert looks at the room window; and finds it has four cross-bars in it, and knows scientifically that the light on Melancthon's eye must be a reflection of the window with its four bars—and engraves it so, accordingly; and who shall dare to say, now, it isn't like Melancthon?

Unfortunately, however, it isn't, nor like any other person in his senses; but like a madman looking at somebody who disputes his hobby. While in this drawing of Holbein's, where a dim grey shadow leaves a mere crumb of white paper,—accidentally it seems, for all the fine scientific reflection,—behold, it is an eye indeed, and of a noble creature.

170. What is the reason? do you ask me; and is all the common teaching about generalization of details true, then?

No; not a syllable of it is true. Holbein is right, not because he draws more generally, but more truly, than Durer. Durer draws what he knows is there; but Holbein, only what he sees. And, as I have told you often before, the really scientific artist is he who not only asserts bravely what he *does* see, but confesses honestly what he does *not*. You must not draw all the hairs in an eyelash; not because it is sublime to generalize them, but because it is impossible to see them. How many hairs there are, a sign painter or an anatomist may count; but how few of them you can see, it is only the utmost masters, Carpaccio, Tintoret, Reynolds, and Velasquez, who count, or know.

171. Such was the effect, then, of his science upon Durer's ideal of beauty, and skill in portraiture. What effect had it on the temper and quantity of his work, as compared with poor ignorant Holbein's! You have only three portraits, by Durer, of the great men of his time, and those bad ones; while he toils his soul out to draw the hoofs of satyrs, the bristles of swine, and the distorted aspects of base women and vicious men.

What, on the contrary, has ignorant Holbein done for you? Shakspeare and he divide between them, by word and look, the Story of England under Henry and Elizabeth.

172. Of the effect of science on the art of Mantegna and Marc Antonio, (far more deadly than on Durer's,) I must tell you in a future lecture ;—the effect of it on their minds, I must partly refer to now, in passing to the third head of my general statement—the influence of new Theology. For Durer and Mantegna, chiefly because of their science, forfeited their place, not only as painters of men, but as servants of God. Neither of them has left one completely noble or completely didactic picture ; while Holbein and Botticelli, in consummate pieces of art, led the way before the eyes of all men, to the purification of their Church and land.

173. III. But the need of reformation presented itself to these two men last named on entirely different terms.

To Holbein, when the word of the Catholic Church proved false, and its deeds bloody ; when he saw it selling permission of sin in his native Augsburg, and strewing the ashes of its enemies on the pure Alpine waters of Constance, what refuge was there for *him* in more ancient religion? Shall he worship Thor again, and mourn over the death of Balder? He reads Nature in her desolate and narrow truth, and she teaches him the Triumph of Death.

But, for Botticelli, the grand gods are old, are immortal. The priests may have taught falsely the story of the Virgin ;—did they not also lie, in the name of Artemis, at Ephesus ; in the name of Aphrodite, at Cyprus?—but shall, therefore, Chastity or Love be dead, or the full moon paler over Arno? Saints of Heaven and Gods of Earth !—shall *these* perish because vain men speak evil of them? Let *us* speak good for ever, and grave, as on the rock, for ages to come, the glory of Beauty, and the triumph of Faith.

174. Holbein had bitterer task.

Of old, the one duty of the painter had been to exhibit the virtues of this life, and hopes of the life to come. Holbein had to show the vices of this life, and to obscure the hope of the future. “ Yes, we walk through the valley of the shadow

of death, and fear all evil, for Thou art not with us, and Thy rod and Thy staff comfort us not." He does not choose this task. It is thrust upon him,—just as fatally as the burial of the dead is in a plague-struck city. These are the things he sees, and must speak. He will not become a better artist thereby ; no drawing of supreme beauty, or beautiful things, will be possible to him. Yet we cannot say he ought to have done anything else, nor can we praise him specially in doing this. It is his fate ; the fate of all the bravest in that day.

175. For instance, there is no scene about which a shallow and feeble painter would have been more sure to adopt the commonplaces of the creed of his time than the death of a child,—chiefly, and most of all, the death of a country child,—a little thing fresh from the cottage and the field. Surely for such an one, angels will wait by its sick bed, and rejoice as they bear its soul away ; and over its shroud flowers will be strewn, and the birds will sing by its grave. So your common sentimentalist would think, and paint. Holbein sees the facts, as they verily are, up to the point when vision ceases. He speaks, then no more.

The country labourer's cottage—the rain coming through its roof, the clay crumbling from its partitions, the fire lighted with a few chips and sticks on a raised piece of the mud floor,—such dais as can be contrived, for use, not for honour. The damp wood sputters ; the smoke, stopped by the roof, though the rain is not, coils round again, and down. But the mother can warm the child's supper of bread and milk so—holding the pan by the long handle and on mud floor though it be, they are happy,—she, and her child, and its brother,—if only they could be left so. They shall not be left so : the young thing must leave them—will never need milk warmed for it any more. It would fain stay,—sees no angels—feels only an icy grip on its hand, and that it cannot stay. Those who loved it shriek and tear their hair in vain, amazed in grief. 'Oh, little one, you must lie out in the fields then, not even under this poor torn roof of thy mother's to-night?'

176. Again : there was not in the old creed any subject more definitely and constantly insisted on than the death of a

miser. He had been happy, the old preachers thought, till then : but his hour has come ; and the black covetousness of hell is awake and watching ; the sharp, harpy claws will clutch his soul out of his mouth, and scatter his treasure for others. So the commonplace preacher and painter taught. Not so Holbein. The devil want to snatch his soul, indeed ! Nay, he never *had* a soul, but of the devil's giving. His misery to begin on his deathbed ! Nay, he had never an unmiserable hour of life. The fiend is with him now,—a paltry, abortive fiend, with no breath even to blow hot with. He supplies the hell-blast *with a machine*. It is winter, and the rich man has his furred cloak and cap, thick and heavy ; the beggar, bare-headed to beseech him, skin and rags hanging about him together, touches his shoulder, but all in vain ; there is other business in hand. More haggard than the beggar himself, wasted and palsied, the rich man counts with his fingers the gain of the years to come.

But of those years, infinite, that are to be, Holbein says nothing. 'I know not ; I see not. This only I see, on this very winter's day, the low pale stumbling-block at your feet, the altogether by you unseen and forgotten Death. You shall not pass *him* by on the other side ; here is a fasting figure in skin and bone, at last, that will stop you ; and for all the hidden treasures of earth, here is your spade : dig now, and find them.'

177. I have said that Holbein was condemned to teach these things. He was not happy in teaching them, nor thanked for teaching them. Nor was Botticelli for his lovelier teaching. But they both could do no otherwise. They lived in truth and steadfastness ; and with both, in their marvellous design, veracity is the beginning of invention, and love its end.

I have but time to show you, in conclusion, how this affectionate self-forgetfulness protects Holbein from the chief calamity of the German temper, vanity, which is at the root of all Durer's weakness. Here is a photograph of Holbein's portrait of Erasmus, and a fine proof of Durer's. In Holbein's, the face leads everything ; and the most lovely qualities of the face lead in that. The cloak and cap are perfectly

painted, just because you look at them neither more nor less than you would have looked at the cloak in reality. You don't say, 'How brilliantly they are touched,' as you would with Rembrandt; nor 'How gracefully they are neglected,' as you would with Gainsborough; nor 'How exquisitely they are shaded,' as you would with Leonardo; nor 'How grandly they are composed,' as you would with Titian. You say only, 'Erasmus is surely there; and what a pleasant sight!' You don't think of Holbein at all. He has not even put in the minutest letter H, that I can see, to remind you of him. Drops his H's, I regret to say, often enough. 'My hand should be enough for you; what matters my name?' But now, look at Durer's. The very first thing you see, and at any distance, is this great square tablet with

"The image of Erasmus, drawn from the life by Albert Durer, 1526,"

and a great straddling A.D. besides. Then you see a cloak, and a table, and a pot, with flowers in it, and a heap of books with all their leaves and all their clasps, and all the little bits of leather gummed in to mark the places; and last of all you see Erasmus's face; and when you do see it, the most of it is wrinkles.

All egotism and insanity, this, gentlemen. Hard words to use; but not too hard to define the faults which rendered so much of Durer's great genius abortive, and to this day paralyze, among the details of a lifeless and ambitious precision, the student, no less than the artist, of German blood. For too many an Erasmus, too many a Durer, among them, the world is all cloak and clasp, instead of face or book; and the first object of their lives is to engrave their initials.

For us, in England, not even so much is at present to be hoped; and yet, singularly enough, it is more our modesty, unwisely submissive, than our vanity, which has destroyed our English school of engraving.

At the bottom of the pretty line engravings which used to represent, characteristically, our English skill, one saw always *two* inscriptions. At the left-hand corner, "Drawn by—so-and-so;" at the right-hand corner, "Engraved by—so-and-

so." Only under the worst and cheapest plates—for the Stationer's Almanack, or the like,—one saw sometimes, "Drawn and engraved by so-and-so," which meant nothing more than that the publisher would not go to the expense of an artist, and that the engraver haggled through as he could. (One fortunate exception, gentlemen, you have in the old drawings for your Oxford Almanack, though the publishers, I have no doubt, even in that case, employed the cheapest artist they could find.)* But in general, no engraver thought himself able to draw; and no artist thought it his business to engrave.

But the fact that this and the following lecture are on the subject of design in engraving, implies of course that in the work we have to examine, it was often the engraver himself who designed, and as often the artist who engraved.

And you will observe that the only engravings which bear imperishable value are, indeed, in this kind. It is true that, in woodcutting, both Durer and Holbein, as in our own days Leech and Tenniel, have workmen under them who can do all they want. But in metal cutting it is not so. For, as I have told you, in metal cutting, ultimate perfection of Line has to be reached; and it can be reached by none but a master's hand; nor by his, unless in the very moment and act of designing. Never, unless under the vivid first force of imagination and intellect, can the Line have its full value. And for this high reason, gentlemen, that paradox which perhaps seemed to you so daring, is nevertheless deeply and finally true, that while a woodcut may be laboriously finished, a grand engraving on metal must be comparatively incomplete. For it must be done, throughout, with the full fire of temper in it, visibly governing its lines, as the wind does the fibres of cloud.

* The drawings were made by Turner, and are now among the chief treasures of the Oxford Galleries. I ought to add some notice of Hogarth to this lecture in the Appendix; but fear I shall have no time; besides, though I have profound respect for Hogarth, as, in literature, I have for Fielding, I can't criticise them, because I know nothing of their subjects.

The value hitherto attached to Rembrandt's etchings, and others imitating them, depends on a true instinct in the public mind for this virtue of line. But etching is an indolent and blundering method at the best; and I do not doubt that you will one day be grateful for the severe disciplines of drawing required in these schools, in that they will have enabled you to know what a line may be, driven by a master's chisel on silver or marble, following, and fostering as it follows, the instantaneous strength of his determined thought.

LECTURE VI.

DESIGN IN THE FLORENTINE SCHOOLS OF ENGRAVING.

1. IN the first of these lectures, I stated to you their subject, as the investigation of the engraved work of a group of men, to whom engraving, as a means of popular address, was above all precious, because their art was distinctively didactic.

Some of my hearers, must be aware that, of late years, the assertion that art should be didactic has been clamorously and violently derided by the countless crowd of artists who have nothing to represent, and of writers who have nothing to say; and that the contrary assertion—that art consists only in pretty colours and fine words,—is accepted, readily enough, by a public which rarely pauses to look at a picture with attention, or read a sentence with understanding.

2. Gentlemen, believe me, there never was any great advancing art yet, nor can be, without didactic purpose. The leaders of the strong schools are, and must be always, either teachers of theology, or preachers of the moral law. I need not tell you that it was as teachers of theology on the walls of the Vatican that the masters with whose names you are most familiar obtained their perpetual fame. But however great their fame, you have not practically, I imagine, ever been materially assisted in your preparation for the schools either of philosophy or divinity by Raphael's 'School of Athens,' by Raphael's 'Theology,'—or by Michael Angelo's 'Judgment.'

My task, to-day, is to set before you some part of the design of the first Master of the works in the Sistine Chapel; and I believe that, from his teaching, you will, even in the hour which I ask you now to give, learn what may be of true use to you in all your future labour, whether in Oxford or elsewhere.

3. You have doubtless, in the course of these lectures, been occasionally surprised by my speaking of Holbein and Sandro Botticelli, as Reformers, in the same tone of respect, and with the same implied assertion of their intellectual power and agency, with which it is usual to speak of Luther and Savonarola. You have been accustomed, indeed, to hear painting and sculpture spoken of as supporting or enforcing Church doctrine; but never as reforming or chastising it. Whether Protestant or Roman Catholic, you have admitted what in the one case you held to be the abuse of painting, in the furtherance of idolatry—in the other, its amiable and exalting ministry to the feebleness of faith. But neither have recognized,—the Protestant his ally,—or the Catholic his enemy, in the far more earnest work of the great painters of the fifteenth century. The Protestant was, in most cases, too vulgar to understand the aid offered to him by painting; and in all cases too terrified to believe in it. He drove the gift-bringing Greek with imprecations from his sectarian fortress, or received him within it only on the condition that he should speak no word of religion there.

4. On the other hand, the Catholic, in most cases too indolent to read, and, in all, too proud to dread, the rebuke of the reforming painters, confused them with the crowd of his old flatterers, and little noticed their altered language, or their graver brow. In a little while, finding they had ceased to be amusing, he effaced their works, not as dangerous, but as dull; and recognized only thenceforward, as art, the innocuous bombast of Michael Angelo, and fluent efflorescence of Bernini. But when you become more intimately and impartially acquainted with the history of the Reformation, you will find that, as surely and earnestly as Memling and Giotto strove in the north and south to set forth and exalt the Cath-

olic faith, so surely and earnestly did Holbein and Botticelli strive, in the north, to chastise, and, in the south, to revive it. In what manner, I will try to-day briefly to show you.

5. I name these two men as the reforming leaders; there were many, rank and file, who worked in alliance with Holbein; with Botticelli, two great ones, Lippi and Perugino. But both of these had so much pleasure in their own pictorial faculty, that they strove to keep quiet, and out of harm's way, —involuntarily manifesting themselves sometimes, however; and not in the wisest manner. Lippi's running away with a novice was not likely to be understood as a step in Church reformation correspondent to Luther's marriage.* Nor have Protestant divines, even to this day, recognized the real meaning of the reports of Perugino's 'infidelity.' Botticelli, the pupil of the one, and the companion of the other, held the truths they taught him through sorrow as well as joy; and he is the greatest of the reformers, because he preached without blame; though the least known, because he died without victory.

I had hoped to be able to lay before you some better biography of him than the traditions of Vasari, of which I gave a short abstract some time back in *Fors Clavigera*; but as yet I have only added internal evidence to the popular story, the more important points of which I must review briefly. It will not waste your time if I read,—instead of merely giving you reference to,—the passages on which I must comment.

6. "His father, Mariano Filipepi, a Florentine citizen, brought him up with care, and caused him to be instructed in all such things as are usually taught to children before they choose a calling. But although the boy readily acquired whatever he wished to learn, yet was he constantly discon-

* The world was not then ready for *Le Père Hyacinthe*;—but the real gist of the matter is that Lippi did, openly and bravely, what the highest prelates in the Church did basely and in secret; also he loved, where they only lusted; and he has been proclaimed therefore by them—and too foolishly believed by us—to have been a shameful person. Of his true life, and the colours given to it, we will try to learn something tenable, before we end our work in Florence.

tented ; neither would he take any pleasure in reading, writing, or accounts, insomuch that the father, disturbed by the eccentric habits of his son, turned him over in despair to a gossip of his, called Botticello, who was a goldsmith, and considered a very competent master of his art, to the intent that the boy might learn the same."

"He took no pleasure in reading, writing, nor accounts"! You will find the same thing recorded of Cimabue ; but it is more curious when stated of a man whom I cite to you as typically a gentleman and a scholar. But remember, in those days, though there were not so many entirely correct books issued by the Religious Tract Society for boys to read, there were a great many more pretty things in the world for boys to see. The Val d'Arno was Pater-noster Row to purpose ; their Father's Row, with books of His writing on the mountain shelves. And the lad takes to looking at things, and thinking about them, instead of reading about them,—which I commend to you, also, as much the more scholarly practice of the two. To the end, though he knows all about the celestial hierarchies, he is not strong in his letters, nor in his dialect. I asked Mr. Tyrrwhitt to help me through with a bit of his Italian the other day. Mr. Tyrrwhitt could only help me by suggesting that it was "Botticelli for so-and-so." And one of the minor reasons which induce me so boldly to attribute these sibyls to him, instead of Bandini, is that the lettering is so ill done. The engraver would assuredly have had his lettering all right,—or at least neat. Botticelli blunders through it, scratches impatiently out when he goes wrong ; and as I told you there's no repentance in the engraver's trade leaves all the blunders visible.

7. I may add one fact bearing on this question lately communicated to me.* In the autumn of 1872 I possessed myself of an Italian book of pen drawings, some, I have no doubt, by Mantegna in his youth, others by Sandro himself. In examining these, I was continually struck by the comparatively feeble and blundering way in which the titles were

* I insert supplementary notes, when of importance, in the text of the lecture, for the convenience of the general reader.

written, while all the rest of the handling was really superb ; and still more surprised when, on the sleeves and hem of the robe of one of the principal figures of women, ("Helena rapita da Paris,") I found what seemed to be meant for inscriptions, intricately embroidered ; which nevertheless, though beautifully drawn, I could not read. In copying Botticelli's Zipporah this spring, I found the border of her robe wrought with characters of the same kind, which a young painter, working with me, who already knows the minor secrets of Italian art better than I,* assures me are letters,—and letters of a language hitherto undeciphered.

8. "There was at that time a close connexion and almost constant intercourse between the goldsmiths and the painters, wherefore Sandro, who possessed considerable ingenuity, and was strongly disposed to the arts of design, became enamoured of painting, and resolved to devote himself entirely to that vocation. He acknowledged his purpose at once to his father ; and the latter, who knew the force of his inclination, took him accordingly to the Carmelite monk, Fra Filippo, who was a most excellent painter of that time, with whom he placed him to study the art, as Sandro himself had desired. Devoting himself thereupon entirely to the vocation he had chosen, Sandro so closely followed the directions, and imitated the manner, of his master, that Fra Filippo conceived a great love for him, and instructed him so effectually, that Sandro rapidly attained to such a degree in art as none would have predicted for him."

I have before pointed out to you the importance of training by the goldsmith. Sandro got more good of it, however, than any of the other painters so educated,—being enabled by it to use gold for light to colour, in a glowing harmony never reached with equal perfection, and rarely attempted, in the later schools. To the last, his paintings are partly treated as work in niello ; and he names himself, in perpetual gratitude, from this first artizan master. Nevertheless, the fortunate fellow finds, at the right moment, another, even more to his mind, and is obedient to him through his youth, as to

* Mr. Charles F. Murray.

the other through his childhood. And this master loves him ; and instructs him ‘so effectually,’—in grinding colors, do you suppose, only ; or in laying of lines only ; or in anything more than these ?

9. I will tell you what Lippi must have taught any boy whom he loved. First, humility, and to live in joy and peace, injuring no man—if such innocence might be. Nothing is so manifest in every face by him, as its gentleness and rest. Secondly, to finish his work perfectly, and in such temper that the angels might say of it—not he himself—‘*Iste perfecit opus.*’ Do you remember what I told you in the Eagle’s Nest, that true humility was in hoping that angels might sometimes admire *our* work ; not in hoping that we should ever be able to admire *theirs* ? Thirdly,—a little thing it seems, but was a great one,—love of flowers. No one draws such lilies or such daisies as Lippi. Botticelli beat him afterwards in roses, but never in lilies. Fourthly, due honour for classical tradition, Lippi is the only religious painter who dresses John Baptist in the camel-skin, as the Greeks dressed Heracles in the lion’s,—over the head. Lastly, and chiefly of all,—Le Père Hyacinthe taught his pupil certain views about the doctrine of the Church, which the boy thought of more deeply than his tutor, and that by a great deal ; and Master Sandro presently got himself into such question for painting heresy, that if he had been as hot-headed as he was true-hearted, he would soon have come to bad end by the tar-barrel. But he is so sweet and so modest, that nobody is frightened ; so clever, that everybody is pleased : and at last, actually the Pope sends for him to paint his own private chapel,—where the first thing my young gentleman does, mind you, is to paint the devil, in a monk’s dress tempting Christ ! The sauciest thing, out and out, done in the history of the Reformation, it seems to me ; yet so wisely done, and with such true respect otherwise shown for what was sacred in the Church, that the Pope didn’t mind : and all went on as merrily as marriage bells.

10. I have anticipated, however, in telling you this, the proper course of his biography, to which I now return.

“While still a youth he painted the figure of Fortitude, among those pictures of the Virtues which Antonio and Pietro Pollaiuolo were executing in the Mercatanzia, or Tribunal of Commerce, in Florence. In Santo Spirito, a church of the same city, he painted a picture for the chapel of the Bardi family: this work he executed with great diligence, and finished it very successfully, depicting certain olive and palm trees therein with extraordinary care.”

It is by a beautiful chance that the first work of his, specified by his Italian biographer, should be the Fortitude.* Note also what is said of his tree drawing.

“Having, in consequence of this work, obtained much credit and reputation, Sandro was appointed by the Guild of Porta Santa Maria to paint a picture in San Marco, the subject of which is the Coronation of Our Lady, who is surrounded by a choir of angels—the whole extremely well designed, and finished by the artist with infinite care. He executed various works in the Medici Palace for the elder Lorenzo, more particularly a figure of Pallas on a shield wreathed with vine branches, whence flames are proceeding: this he painted of the size of life. A San Sebastiano was also among the most remarkable of the works executed for Lorenzo. In the church of Santa Maria Maggiore, in Florence, is a Pietà, with small figures, by this master: this is a very beautiful work. For different houses in various parts of the city Sandro painted many pictures of a round form, with numerous figures of women undraped. Of these there are still two examples at Castello, a villa of the Duke Cosimo,—one representing the birth of Venus, who is borne to earth by the Loves and Zephyrs; the second also presenting the figure of Venus crowned with flowers by the Graces: she is here intended to denote the Spring, and the allegory is expressed by the painter with extraordinary grace.”

Our young Reformer enters, it seems, on a very miscellaneous course of study; the Coronation of Our Lady; St. Sebastian; Pallas in vine-leaves; and Venus,—without fig-leaves.

* Some notice of this picture is given at the beginning of my third Morning in Florence, ‘Before the Soldan.’

Not wholly Calvinistic, Fra Filippo's teaching seems to have been! All the better for the boy—being such a boy as he was: but I cannot in this lecture enter farther into my reasons for saying so.

11. Vasari, however, has shot far ahead in telling us of this picture of the Spring, which is one of Botticelli's completest works. Long before he was able to paint Greek nymphs, he had done his best in idealism of greater spirits; and, while yet quite a youth, painted, at Castello, the Assumption of Our Lady, with "the patriarchs, the prophets, the apostles, the evangelists, the martyrs, the confessors, the doctors, the virgins, and the hierarchies!"

Imagine this subject proposed to a young, (or even old) British artist, for his next appeal to public sensation at the Academy! But do you suppose that the young British artist is wiser and more civilized than Lippi's scholar, because his only idea of a patriarch is of a man with a long beard; of a doctor, the M.D. with the brass plate over the way; and of a virgin, Miss —— of the —— theatre?

Not that even Sandro was able, according to Vasari's report, to conduct the entire design himself. The proposer of the subject assisted him; and they made some modifications in the theology, which brought them both into trouble—so early did Sandro's innovating work begin, into which subjects our gossiping friend waives unnecessary inquiry, as follows.

"But although this picture is exceedingly beautiful, and ought to have put envy to shame, yet there were found certain malevolent and censorious persons who, not being able to affix any other blame to the work, declared that Matteo and Sandro had erred gravely in that matter, and had fallen into grievous heresy.

"Now, whether this be true or not, let none expect the judgment of that question from me: it shall suffice me to note that the figures executed by Sandro in that work are entirely worthy of praise; and that the pains he took in depicting those circles of the heavens must have been very great, to say nothing of the angels mingled with the other figures, or

of the various foreshortenings, all which are designed in a very good manner.

"About this time Sandro received a commission to paint a small picture with figures three parts of a braccio high,—the subject an Adoration of the Magi.

"It is indeed a most admirable work : the composition, the design, and the colouring are so beautiful that every artist who examines it is astonished ; and, at the time, it obtained so great a name in Florence, and other places, for the master, that Pope Sixtus IV. having erected the chapel built by him in his palace at Rome, and desiring to have it adorned with paintings, commanded that Sandro Botticelli should be appointed Superintendent of the work."

12. Vasari's words, "about this time," are evidently wrong. It must have been many and many a day after he painted Matteo's picture that he took such high standing in Florence as to receive the mastership of the works in the Pope's chapel at Rome. Of his position and doings there, I will tell you presently ; meantime, let us complete the story of his life.

"By these works Botticelli obtained great honour and reputation among the many competitors who were labouring with him, whether Florentines or natives of other cities, and received from the Pope a considerable sum of money ; but this he consumed and squandered totally, during his residence in Rome, where he lived without due care, as was his habit."

13. Well, but one would have liked to hear *how* he squandered his money, and whether he was without care—of other things than money.

It is just possible, Master Vasari, that Botticelli may have laid out his money at higher interest than you know of ; meantime, he is advancing in life and thought, and becoming less and less comprehensible to his biographer. And at length, having got rid, somehow, of the money he received from the Pope ; and finished the work he had to do, and uncovered it, —free in conscience, and empty in purse, he returned to Florence, where, "being a sophistical person, he made a comment on a part of Dante, and drew the Inferno, and put it in en-

graving, in which he consumed much time ; and not working for this reason, brought infinite disorder into his affairs."

14. Unpaid work, this engraving of Dante, you perceive,—consuming much time also, and not appearing to Vasari to be work at all. It is but a short sentence, gentlemen,—this, in the old edition of Vasari, and obscurely worded,—a very foolish person's contemptuous report of a thing to him totally incomprehensible. But the thing itself is out-and-out the most important fact in the history of the religious art of Italy. I can show you its significance in not many more words than have served to record it.

Botticelli had been painting in Rome ; and had expressly chosen to represent there,—being Master of Works, in the presence of the Defender of the Faith,—the foundation of the Mosaic law ; to his mind the Eternal Law of God,—that law of which modern Evangelicals sing perpetually their own original psalm, "Oh, how hate I Thy law ! it is my abomination all the day." Returning to Florence, he reads Dante's vision of the Hell created by its violation. He knows that the pictures he has painted in Rome cannot be understood by the people ; they are exclusively for the best trained scholars in the Church. Dante, on the other hand, can only be read in manuscript ; but the people could and would understand *his* lessons, if they were pictured in accessible and enduring form. He throws all his own lauded work aside,—all for which he is most honoured, and in which his now matured and magnificent skill is as easy to him as singing to a perfect musician. And he sets himself to a servile and despised labour,—his friends mocking him, his resources failing him, infinite 'disorder' getting into his affairs—of this world.

15. Never such another thing happened in Italy any more. Botticelli engraved her Pilgrim's Progress for her, putting himself in prison to do it. She would not read it when done. Raphael and Marc Antonio were the theologians for her money. Pretty Madonnas, and satyrs with abundance of tail,—let our pilgrim's progress be in *these* directions, if you please.

Botticelli's own pilgrimage, however, was now to be accomplished triumphantly, with such crowning blessings as Heaven might grant to him. In spite of his friends and his disordered affairs, he went his own obstinate way; and found another man's words worth engraving as well as Dante's; not without perpetuating, also, what he deemed worthy of his own.

16. What would that be, think you? His chosen works before the Pope in Rome?—his admired Madonnas in Florence?—his choirs of angels and thickets of flowers? Some few of these—yes, as you shall presently see; but “the best attempt of this kind from his hand is the Triumph of Faith, by Fra Girolamo Savonarola, of Ferrara, of whose sect our artist was so zealous a partisan that he totally abandoned painting, and not having any other means of living, he fell into very great difficulties. But his attachment to the party he had adopted increased; he became what was then called a *Piagnone*, or Mourner, and abandoned all labour; insomuch that, finding himself at length become old, being also very poor, he must have died of hunger had he not been supported by Lorenzo de' Medici, for whom he had worked at the small hospital of Volterra and other places, who assisted him while he lived, as did other friends and admirers of his talents.”

17. In such dignity and independence—having employed his talents not wholly at the orders of the dealer—died, a poor bedesman of Lorenzo de' Medici, the President of that high academy of art in Rome, whose Academicians were Perugino, Ghirlandajo, Angelico, and Signorelli; and whose students, Michael Angelo and Raphael.

‘A worthless, ill-conducted fellow on the whole,’ thinks Vasari, ‘with a crazy fancy for scratching on copper.’

Well, here are some of the scratches for you to see; only, first, I must ask you seriously for a few moments to consider what the two powers were, which, with this iron pen of his, he has set himself to reprove.

18. Two great forms of authority reigned over the entire civilized world, confessedly, and by name, in the middle ages.

They reign over it still, and must for ever, though at present very far from confessed ; and, in most places, ragingly denied.

The first power is that of the Teacher, or true Father ; the Father ‘in God.’ It may be—happy the children to whom it is—the actual father also ; and whose parents have been their tutors. But for the most part, it will be some one else who teaches them, and moulds their minds and brain. All such teaching, when true, being from above, and coming down from the Father of Lights, with whom is no variableness, neither shadow of turning, is properly that of the holy Catholic ‘*ἐκκλησία*,’ council, church, or papacy, of many fathers in God, not of one. Eternally powerful and divine ; revered of all humble and lowly scholars, in Jewry, in Greece, in Rome, in Gaul, in England, and beyond sea, from Arctic zone to zone.

The second authority is the power of National Law, enforcing justice in conduct by due reward and punishment. Power vested necessarily in magistrates capable of administering it with mercy and equity ; whose authority, be it of many or few, is again divine, as proceeding from the King of kings, and was acknowledged, throughout civilized Christendom, as the power of the Holy Empire, or Holy Roman Empire, because first throned in Rome ; but it is for ever also acknowledged, namelessly, or by name, by all loyal, obedient, just, and humble hearts, which truly desire that, whether for them or against them, the eternal equities and dooms of Heaven should be pronounced and executed ; and as the wisdom or word of their Father should be taught, so the will of their Father should be done, on earth, as it is in heaven.

19. You all here know what contention, first, and then what corruption and dishonour, had paralyzed these two powers before the days of which we now speak. Reproof, and either reform or rebellion, became necessary everywhere. The northern Reformers, Holbein, and Luther, and Henry, and Cromwell, set themselves to their task rudely, and, it might seem, carried it through. The southern Reformers, Dante, and Savonarola, and Botticelli, set hand to their task reverently, and, it seemed, did not by any means carry it through. But the end is not yet.

20. Now I shall endeavour to-day to set before you the art of Botticelli, especially as exhibiting the modesty of great imagination trained in reverence, which characterized the southern Reformers ; and as opposed to the immodesty of narrow imagination, trained in self trust, which characterized the northern Reformers.

‘The modesty of great *imagination* ;’ that is to say, of the power which conceives all things in true relation, and not only as they affect ourselves. I can show you this most definitely by taking one example of the modern, and unschooled temper, in Bewick ;* and setting it beside Botticelli’s treatment of the same subject of thought,—namely, the meaning of war, and the reforms necessary in the carrying on of war.

21. Both the men are entirely at one in their purpose. They yearn for peace and justice to rule over the earth, instead of the sword ; but see how differently they will say what is in their hearts to the people they address. To Bewick, war was more an absurdity than it was a horror : he had not seen battle-fields, still less had he read of them, in ancient days. He cared nothing about heroes,—Greek, Roman, or Norman. What he knew, and saw clearly, was that Farmer Hodge’s boy went out of the village one holiday afternoon, a fine young fellow, rather drunk, with a coloured riband in his hat ; and came back, ten years afterwards, with one leg, one eye, an old red coat, and a tobacco-pipe in the pocket of it. That is what he has got to say, mainly. So, for the pathetic side of the business, he draws you two old soldiers meeting as bricklayers’ labourers ; and for the absurd side of it, he draws a stone, sloping sideways with age, in a bare field, on which you can just read, out of a long inscription, the words “glorious victory ;” but no one is there to read them,—only a jackass, who uses the stone to scratch himself against.

22. Now compare with this Botticelli’s reproof of war. *He*

* I am bitterly sorry for the pain which my partial references to the man whom of all English artists whose histories I have read, I most esteem, have given to one remaining member of his family. I hope my meaning may be better understood after she has seen the close of this lecture.

had seen it, and often ; and between noble persons ;—knew the temper in which the noblest knights went out to it ;—knew the strength, the patience, the glory, and the grief of it. He would fain see his Florence in peace ; and yet he knows that the wisest of her citizens are her bravest soldiers. So he seeks for the ideal of a soldier, and for the greatest glory of war, that in the presence of these he may speak reverently, what he must speak. He does not go to Greece for his hero. He is not sure that even her patriotic wars were always right. But, by his religious faith, he cannot doubt the nobleness of the soldier who put the children of Israel in possession of their promised land, and to whom the sign of the consent of heaven was given by its pausing light in the valley of Ajalon. Must then setting sun and risen moon stay, he thinks, only to look upon slaughter ? May no soldier of Christ bid them stay otherwise than so ? He draws Joshua, but quitting his hold of the sword : its hilt rests on his bent knee ; and he kneels before the sun, not commands it ; and this is his prayer :—

“ Oh, King of kings, and Lord of lords, who alone rulest always in eternity, and who correctest all our wanderings,—Giver of melody to the choir of angels, listen Thou a little to our bitter grief, and come and rule us, oh Thou highest King, with Thy love which is so sweet ! ”

Is not that a little better, and a little wiser, than Bewick's jackass ? Is it not also better, and wiser, than the sneer of modern science ? ‘ What great men are we !—we, forsooth, can make almanacs ; and know that the earth turns round. Joshua indeed ! Let us have no more talk of the old clothes-man.’

All Bewick's simplicity is in that ; but none of Bewick's understanding.

23. I pass to the attack made by Botticelli upon the guilt of wealth. So I had at first written ; but I should rather have written, the appeal made by him against the cruelty of wealth, then first attaining the power it has maintained to this day.

The practice of receiving interest had been confined, until this fifteenth century, with contempt and malediction, to the

profession, so styled, of usurers, or to the Jews. The merchants of Augsburg introduced it as a convenient and pleasant practice among Christians also; and insisted that it was decorous and proper even among respectable merchants. In the view of the Christian Church of their day, they might more reasonably have set themselves to defend adultery.* However, they appointed Dr. John Eck, of Ingoldstadt, to hold debates in all possible universities, at their expense, on the allowing of interest; and as these Augsburgers had in Venice their special mart, Fondaco, called of the Germans, their new notions came into direct collision with old Venetian ones, and were much hindered by them, and all the more, because, in opposition to Dr. John Eck, there was preaching on the other side of the Alps. The Franciscans, poor themselves, preached mercy to the poor: one of them, Brother Marco of San Gallo, planned the 'Mount of Pity,' for their defence, and the merchants of Venice set up the first in the world, against the German Fondaco. The dispute burned far on towards our own times. You perhaps have heard before of one Antonio, a merchant of Venice, who persistently retained the then obsolete practice of lending money gratis, and of the peril it brought him into with the usurers. But you perhaps did not before know why it was the flesh, or heart of flesh, in him, that they so hated.

24. Against this newly risen demon of authorized usury, Holbein and Botticelli went out to war together. Holbein, as we have partly seen in his designs for the Dance of Death, struck with all his soldier's strength.† Botticelli uses neither satire nor reproach. He turns altogether away from the criminals; appeals only to heaven for defence against them. He engraves the design which, of all his work, must have cost him hardest toil in its execution,—the Virgin praying to her Son in heaven for pity upon the poor: "For these are also my children."‡ Underneath, are the seven works of Mercy; and

* Read Ezekiel xviii.

† See also the account by Dr. Woltmann of the picture of the Triumph of Riches. 'Holbein and his Time,' p. 352.

‡ These words are engraved in the plate, as spoken by the Virgin.

in the midst of them, the building of the Mount of Pity : in the distance lies Italy, mapped in cape and bay, with the cities which had founded mounts of pity,—Venice in the distance, chief. Little seen, but engraved with the master's loveliest care, in the background there is a group of two small figures—the Franciscan brother kneeling, and an angel of Victory crowning him.

25. I call it an angel of Victory, observe, with assurance ; although there is no legend claiming victory, or distinguishing this angel from any other of those which adorn with crowns of flowers the nameless crowds of the blessed. For Botticelli has other ways of speaking than by written legends. I know by a glance at this angel that he has taken the action of it from a Greek coin ; and I know also that he had not, in his own exuberant fancy, the least need to copy the action of any figure whatever. So I understand, as well as if he spoke to me, that he expects me, if I am an educated gentleman, to recognize this particular action as a Greek angel's ; and to know that it is a temporal victory which it crowns.

26. And now farther, observe, that this classical learning of Botticelli's, received by him, as I told you, as a native element of his being, gives not only greater dignity and gentleness, but far wider range, to his thoughts of Reformation. As he asks for pity from the cruel Jew to the *poor* Gentile, so he asks for pity from the proud Christian to the *untaught* Gentile. Nay, for more than pity, for fellowship, and acknowledgment of equality before God. The learned men of his age in general brought back the Greek mythology as anti-Christian. But Botticelli and Perugino, as pre-Christian ; nor only as pre-Christian, but as the foundation of Christianity. But chiefly Botticelli, with perfect grasp of the Mosaic and classic theology, thought over and seized the harmonies of both ; and he it was who gave the conception of that great choir of the prophets and sibyls, of which Michael Angelo, more or less ignorantly borrowing it in the Sistine Chapel, in great part lost the meaning, while he magnified the aspect.

27. For, indeed, all Christian and heathen mythology had alike become to Michael Angelo only a vehicle for the display

of his own powers of drawing limbs and trunks : and having resolved, and made the world of his day believe, that all the glory of design lay in variety of difficult attitude, he flings the naked bodies about his ceiling with an upholsterer's ingenuity of appliance to the corners they could fit, but with total absence of any legible meaning. Nor do I suppose that one person in a million, even of those who have some acquaintance with the earlier masters, takes patience in the Sistine Chapel to conceive the original design. But Botticelli's mastership of the works evidently was given to him as a theologian, even more than as a painter ; and the moment when he came to Rome to receive it, you may hold for the crisis of the Reformation in Italy. The main effort to save her priesthood was about to be made by her wisest Reformer,—face to face with the head of her Church,—not in contest with him, but in the humblest subjection to him ; and in adornment of his own chapel for his own delight, and more than delight, if it might be.

28. Sandro brings to work, not under him, but with him, the three other strongest and worthiest men he knows, Perugino, Ghirlandajo, and Luca Signorelli. There is evidently entire fellowship in thought between Botticelli and Perugino. They two together plan the whole ; and Botticelli, though the master, yields to Perugino the principal place, the end of the chapel, on which is to be the Assumption of the Virgin. It was Perugino's favourite subject, done with his central strength ; assuredly the crowning work of his life, and of lovely Christian art in Europe.

Michael Angelo painted it out, and drew devils and dead bodies all over the wall instead. But there remains to us, happily, the series of subjects designed by Botticelli to lead up to this lost one.

29. He came, I said, not to attack, but to restore the Papal authority. To show the power of inherited honour, and universal claim of divine law, in the Jewish and Christian Church,—the law delivered first by Moses ; then, in final grace and truth, by Christ.

He designed twelve great pictures, each containing some

twenty figures the size of life, and groups of smaller ones scarcely to be counted. Twelve pictures,—six to illustrate the giving of the law by Moses ; and six, the ratification and completion of it by Christ. Event by event, the jurisprudence of each dispensation is traced from dawn to close in this correspondence.

- | | |
|--|---|
| 1. Covenant of Circumcision. | 7. Covenant of Baptism. |
| 2. Entrance on his Ministry
by Moses. | 8. Entrance on his Ministry by
Christ. |
| 3. Moses by the Red Sea. | 9. Peter and Andrew by the Sea of
Galilee. |
| 4. Delivery of Law on Sinai. | 10. Sermon on Mount. |
| 5. Destruction of Korah. | 11. Giving Keys to St. Peter. |
| 6. Death of Moses. | 12. Last Supper. |

Of these pictures, Sandro painted three himself, Perugino three, and the Assumption ; Ghirlandajo one, Signorelli one, and Rosselli four.* I believe that Sandro intended to take the roof also, and had sketched out the main succession of its design ; and that the prophets and sibyls which he meant to paint, he drew first small, and engraved his drawings afterwards, that some part of the work might be, at all events, thus communicable to the world outside of the Vatican.

30. It is not often that I tell you my beliefs ; but I am forced here, for there are no dates to found more on. Is it not wonderful that among all the infinite mass of fool's thoughts about the "majestic works of Michael Angelo" in the Sistine Chapel, no slightly more rational person has ever asked what the chapel was first meant to be like, and how it was to be roofed ?

Nor can I assure myself, still less you, that all these prophets and sibyls are Botticelli's. Of many there are two engravings, with variations : some are inferior in parts, many altogether. He signed none ; never put grand tablets with 'S. B.' into his skies ; had other letters than those to engrave, and no time to spare. I have chosen out of the series three of the sibyls, which have, I think, clear internal evidence of being his ; and

* Cosimo Rosselli, especially chosen by the Pope for his gay colouring.

these you shall compare with Michael Angelo's. But first I must put you in mind what the sibyls were.

31. As the prophets represent the voice of God in man, the sibyls represent the voice of God in nature. They are properly all forms of one sibyl, *Διὸς Βουλή*, the counsel of God ; and the chief one, at least in the Roman mind, was the Sibyl of Cumae. From the traditions of her, the Romans, and we through them, received whatever lessons the myth, or fact, of sibyl power has given to mortals.

How much have you received, or may you yet receive, think you, of that teaching? I call it the myth, or fact ; but remember that, *as a myth, it is a fact.* This story has concentrated whatever good there is in the imagination of visionary powers in women, inspired by nature only. The traditions of witch and gipsy are partly its offshoots. You despise both, perhaps. But can you, though in utmost pride of your supreme modern wisdom, suppose that the character—say, even of so poor and far-fallen a sibyl as Meg Merrilies—is only the coinage of Scott's brain ; or that, even being no more, it is valueless? Admit the figure of the Cumaean Sibyl, in like manner, to be the coinage only of Virgil's brain. 'As such, it, and the words it speaks, are yet facts in which we may find use, if we are reverent to them.

To me, personally, (I must take your indulgence for a moment to speak wholly of myself,) they have been of the truest service—quite material and indisputable.

I am writing on St. John's Day, in the monastery of Assisi ; and I had no idea whatever, when I sat down to my work this morning, of saying any word of what I am now going to tell you. I meant only to expand and explain a little what I said in my lecture about the Florentine engraving. But it seems to me now that I had better tell you what the Cumaean Sibyl has actually done for me.

32. In 1871, partly in consequence of chagrin at the Revolution in Paris, and partly in great personal sorrow, I was struck by acute inflammatory illness at Matlock, and reduced to a state of extreme weakness ; lying at one time unconscious for some hours, those about me having no hope of my life. I

have no doubt that the immediate cause of the illness was simply, eating when I was not hungry ; so that modern science would acknowledge nothing in the whole business but an extreme and very dangerous form of indigestion ; and entirely deny any interference of the Cumæan Sibyl in the matter.

I once heard a sermon by Dr. Guthrie, in Edinburgh, upon the wickedness of fasting. It was very eloquent and ingenious, and finely explained the superiority of the Scotch Free Church to the benighted Catholic Church, in that the Free Church saw no merit in fasting. And there was no mention, from beginning to end of the sermon, of even the existence of such texts as Daniel i. 12, or Matthew vi. 16.

Without the smallest merit, I admit, in fasting, I was nevertheless, reduced at Matlock to a state very near starvation ; and could not rise from my pillow, without being lifted, for some days. And in the first clearly pronounced stage of recovery, when the perfect powers of spirit had returned, while the body was still as weak as it well could be, I had three dreams, which made a great impression on me ; for in ordinary health my dreams are supremely ridiculous, if not unpleasant ; and in ordinary conditions of illness, very ugly, and always without the slightest meaning. But these dreams were all distinct and impressive, and had much meaning, if I chose to take it.

33. The first* was of a Venetian fisherman, who wanted me to follow him down into some water which I thought was too deep ; but he called me on, saying he had something to show me ; so I followed him ; and presently, through an opening, as if in the arsenal wall, he showed me the bronze horses of St. Mark's, and said, 'See, the horses are putting on their harness.'

The second was of a preparation at Rome, in St. Peter's, (or a vast hall as large as St. Peter's,) for the exhibition of a religious drama. Part of the play was to be a scene in which demons were to appear in the sky ; and the stage servants were arranging grey fictitious clouds, and painted fiends, for it, under the direction of the priests. There was a woman

* I am not certain of their order at this distance of time.

dressed in black, standing at the corner of the stage watching them, having a likeness in her face to one of my own dead friends ; and I knew somehow that she was not that friend, but a spirit ; and she made me understand, without speaking, that I was to watch, for the play would turn out other than the priests expected. And I waited ; and when the scene came on the clouds became real clouds, and the fiends real fiends, agitating them in slow quivering, wild and terrible, over the heads of the people and priests. I recollected distinctly, however, when I woke, only the figure of the black woman mocking the people, and of one priest in an agony of terror, with the sweat pouring from his brow, but violently scolding one of the stage servants for having failed in some ceremony, the omission of which, he thought, had given the devils their power.

The third dream was the most interesting and personal. Some one came to me to ask me to help in the deliverance of a company of Italian prisoners who were to be ransomed for money. I said I had no money. They answered, Yes, I had some that belonged to me as a brother of St. Francis, if I would give it up. I said I did not know even that I *was* a brother of St. Francis ; but I thought to myself, that perhaps the Franciscans of Fèssole, whom I had helped to make hay in their fields in 1845, had adopted me for one ; only I didn't see how the consequence of that would be my having any money. However, I said they were welcome to whatever I had ; and then I heard the voice of an Italian woman singing ; and I have never heard such divine singing before nor since ; the sounds absolutely strong and real, and the melody altogether lovely. If I could have written it ! But I could not even remember it when I woke,—only how beautiful it was.

34. Now these three dreams have, every one of them, been of much use to me since ; or so far as they have failed to be useful, it has been my own fault, and not theirs ; but the chief use of them at the time was to give me courage and confidence in myself, both in bodily distress, of which I had still not a little to bear ; and worse, much mental anxiety about matters supremely interesting to me, which were turning out

ill. And through all such trouble—which came upon me as I was recovering, as if it meant to throw me back into the grave,—I held out and recovered, repeating always to myself, or rather having always murmured in my ears, at every new trial, one Latin line,

Tu ne cede malis, sed contra fortior ito.

Now I had got this line out of the tablet in the engraving of Raphael's vision, and had forgotten where it came from. And I thought I knew my sixth book of Virgil so well, that I never looked at it again while I was giving these lectures at Oxford, and it was only here at Assisi, the other day, wanting to look more accurately at the first scene by the lake Avernus, that I found I had been saved by the words of the Cumæan Sibyl.

35. "*Quam tua te Fortuna sinet*," the completion of the sentence, has yet more and continual teaching in it for me now ; as it has for all men. Her opening words, which have become hackneyed, and lost all present power through vulgar use of them, contain yet one of the most immortal truths ever yet spoken for mankind ; and they will never lose their power of help for noble persons. But observe, both in that lesson, "*Facilis descensus Averni*," etc. ; and in the still more precious, because universal, one on which the strength of Rome was founded,—the burning of the books,—the Sibyl speaks only as the voice of Nature, and of her laws ;—not as a divine helper, prevailing over death ; but as a mortal teacher warning us against it, and strengthening us for our mortal time ; but not for eternity. Of which lesson her own history is a part, and her habitation by the Avernus lake. She desires immortality, fondly and vainly, as we do ourselves. She receives, from the love of her *refused* lover, Apollo, not immortality, but length of life ;—her years to be as the grains of dust in her hand. And even this she finds was a false desire ; and her wise and holy desire at last is—to die. She wastes away ; becomes a shade only, and a voice. The Nations ask her, What wouldst thou ? She answers, Peace ; only let my last words be true. "*L'ultimo mie parlar sie verace.*"

36. Therefore, if anything is to be conceived, rightly, and chiefly, in the form of the Cumæan Sibyl, it must be of fading virginal beauty, of enduring patience, of far-looking into futurity. "For after my death there shall yet return," she says, "another virgin."

Jam redit et virgo ;—redeunt Saturnia regna,
Ultima Cumæi venit jam carminis aetas.

Here then is Botticelli's Cumæan Sibyl. She is armed, for she is the prophetess of Roman fortitude ;—but her faded breast scarcely raises the corslet ; her hair floats, not falls, in waves like the currents of a river,—the sign of enduring life ; the light is full on her forehead : she looks into the distance as in a dream. It is impossible for art to gather together more beautifully or intensely every image which can express her true power, or lead us to understand her lesson.

37. Now you do not, I am well assured, know one of Michael Angelo's sibyls from another : unless perhaps the Delphian, whom of course he makes as beautiful as he can. But of this especially Italian prophetess, one would have thought he might, at least in some way, have shown that he knew the history, even if he did not understand it. She might have had more than one book, at all events, to burn. She might have had a stray leaf or two fallen at her feet. He could not indeed have painted her only as a voice ; but his anatomical knowledge need not have hindered him from painting her virginal youth, or her wasting and watching age, or her inspired hope of a holier future.

38. Opposite,—fortunately, photograph from the figure itself, so that you can suspect me of no exaggeration,—is Michael Angelo's Cumæan Sibyl, wasting away. It is by a grotesque and most strange chance that he should have made the figure of this Sybil, of all others in the chapel, the most fleshly and gross, even proceeding to the monstrous license of showing the nipples of the breast as if the dress were molded over them like plaster. Thus he paints the poor nymph beloved of Apollo,—the clearest and queenliest in prophecy and com-



LVTTIMO ME PARLAR ME ZIVERACIE
 PERO CHE GIOVITI ZONGLIUTIMI CANTI
 DEL VENIMENTO E DELLO RE DIPACIE
 OCHICCI ZALVERA NOITVTTI QVANTI
 EPRENDERA CARNIVMANA ZIGLI PIACIE
 E DZTERRAZZI VMILAT TVTTI CHVANTI
 E LA MADRE PRENDE VMILVERGINELLA
 E LA ZARA ZOPROGNI DONNA BELLA

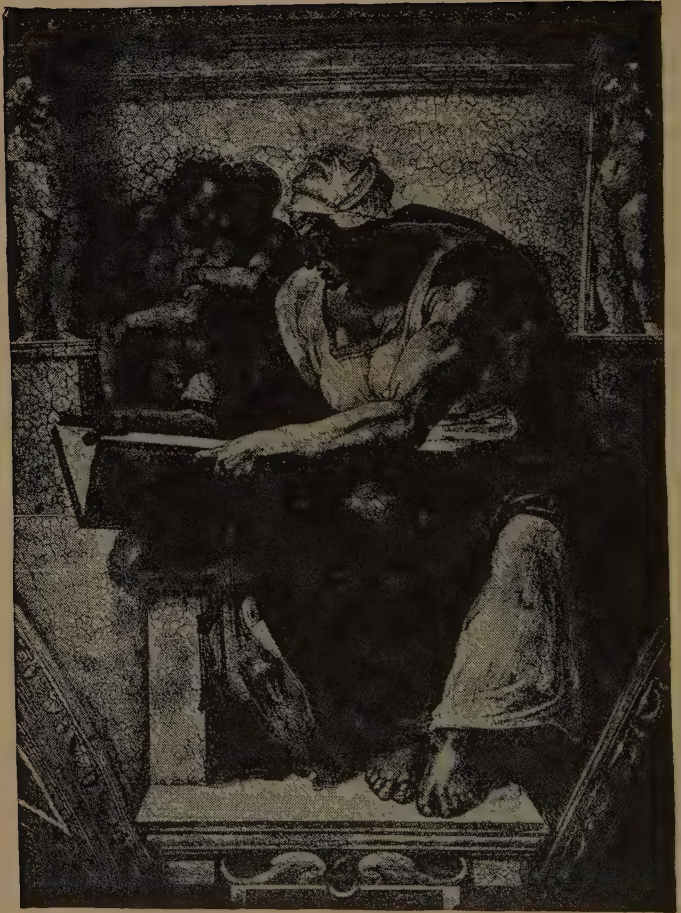


PLATE VIII.—THE NYMPH BELOVED OF APOLLO. MICHAEL ANGELO.



PLATE IX.—IN THE WOODS OF IDA.

mand of all the sybils,—as an ugly crone, with the arms of Goliath, poring down upon a single book.

39. There is one point of fine detail, however, in Botticelli's Cumaean Sibyl, and in the next I am going to show you, to explain which I must go back for a little while to the question of the direct relation of the Italian painters to the Greek. I don't like repeating in one lecture what I have said in another ; but to save you the trouble of reference, must remind you of what I stated in my fourth lecture on Greek birds, when we were examining the adoption of the plume crests in armour, that the crest signifies command ; but the diadem, *obedience* ; and that every crown is primarily a diadem. It is the thing that binds, before it is the thing that honours.

Now all the great schools dwell on this symbolism. The long flowing hair is the symbol of life, and the *διάδημα* of the law restraining it. Royalty, or kingliness, over life, restraining and glorifying. In the extremity of restraint—in death, whether noble, as of death to Earth, or ignoble as of death to Heaven, the *διάδημα* is fastened with the mortcloth : “ Bound hand and foot with grave-clothes, and the face bound about with the napkin.”

40. Now look back to the first Greek head I ever showed you, used as the type of archaic sculpture in Aratra Pentelici, and then look at the crown in Botticelli's *Astrologia*. It is absolutely the Greek form,—even to the peculiar oval of the forehead ; while the diadem—the governing law—is set with appointed stars—to rule the destiny and thought. Then return to the Cumaean Sibyl. She, as we have seen, is the symbol of enduring life—almost immortal. The diadem is withdrawn from the forehead—reduced to a narrow fillet—here, and the hair thrown free.

41. From the Cumaean Sibyl's diadem, traced only by points, turn to that of the Hellespontic, (Plate 9, opposite). I do not know why Botticelli chose her for the spirit of prophecy in old age ; but he has made this the most interesting plate of the series in the definiteness of its connection with the work from Dante, which becomes his own prophecy in old age. The fantastic yet solemn treatment of the gnarled

wood occurs, as far as I know, in no other engravings but this and the illustrations to Dante ; and I am content to leave it, with little comment, for the reader's quiet study, as showing the exuberance of imagination which other men at this time in Italy allowed to waste itself in idle arabesque, restrained by Botticelli to his most earnest purposes ; and giving the withered tree-trunks hewn for the rude throne of the aged prophetess, the same harmony with her fading spirit which the rose has with youth, or the laurel with victory. Also in its weird characters, you have the best example I can show you of the orders of decorative design which are especially expressible by engraving, and which belong to a group of art-instincts scarcely now to be understood, much less recovered, (the influence of modern naturalistic imitation being too strong to be conquered)—the instincts, namely, for the arrangement of pure line, in labyrinthine intricacy, through which the grace of order may give continual clue. The entire body of ornamental design, connected with writing, in the middle ages seems as if it were a sensible symbol, to the eye and brain, of the methods of error and recovery, the minglings of crooked with straight, and perverse with progressive, which constitute the great problem of human morals and fate ; and when I chose the title for the collected series of these lectures, I hoped to have justified it by careful analysis of the methods of labyrinthine ornament, which, made sacred by Theseian traditions,* and beginning in imitation of physical truth, with the spiral waves of the waters of Babylon as the Assyrian carved them, entangled in their returns the eyes of men, on Greek vase and Christian manuscript—till they closed in the arabesques which sprang round the last luxury of Venice and Rome.

But the labyrinth of life itself, and its more and more interwoven occupation, become too manifold, and too difficult for me ; and of the time wasted in the blind lanes of it, perhaps that spent in analysis or recommendation of the art to which men's present conduct makes them insensible, has been chiefly cast away. On the walls of the little room where I finally revise

* Callimachus, 'Delos,' 304 etc.

this lecture,* hangs an old silken sampler of great-grandame's work : representing the domestic life of Abraham : chiefly the stories of Isaac and Ishmael. Sarah at her tent-door, watching with folded arms, the dismissal of Hagar : above, in a wilderness full of fruit trees, birds, and butterflies, little Ishmael lying at the root of a tree, and the spent bottle under another ; Hagar in prayer, and the angel appearing to her out of a wreathed line of gloomily undulating clouds, which, with a dark-rayed sun in the midst, surmount the entire composition in two arches, out of which descend shafts of (I suppose) beneficent rain ; leaving, however, room, in the corner opposite to Ishmael's angel, for Isaac's, who stays Abraham in the sacrifice : the ram in the thicket, the squirrel in the plum tree above him, and the grapes, pears, apples, roses, and daisies of the foreground, being all wrought with involution of such ingenious needle-work as may well rank, in the patience, the natural skill, and the innocent pleasure of it, with the truest works of Florentine engraving. Nay ; the actual tradition of many of the forms of ancient art is in many places evident,—as for instance in the spiral summits of the flames of the wood on the altar, which are like a group of first-springing fern. On the wall opposite is a smaller composition, representing Justice with her balance and sword, standing between the sun and moon, with a background of pinks, borage, and corncockle : a third is only a cluster of tulips and iris, with two Byzantine peacocks ; but the spirits of Penelope and Ariadne reign vivid in all the work—and the richness of pleasurable fancy is as great still, in these silken labours, as in the marble arches and golden roof of the cathedral of Monreal.

But what is the use of explaining or analyzing it? Such work as this means the patience and simplicity of all feminine life ; and can be produced, among *us* at least, no more, Gothic tracery itself, another of the instinctive labyrinthine intricacies of old, though analyzed to its last section, has become now the symbol only of a foolish ecclesiastical sect, retained for their shibboleth, joyless and powerless for all good. The very labyrinth of the grass and flowers of our fields, though

* In the Old King's Arms Hotel, Lancaster.

dissected to its last leaf, is yet bitten bare, or trampled to slime, by the Minotaur of our lust ; and for the traceried spire of the poplar by the brook, we possess but the four-square furnace tower, to mingle its smoke with heaven's thunder-clouds.*

We will look yet at one sampler more of the engraved work, done in the happy time when flowers were pure, youth simple, and imagination gay,—Botticelli's Libyan Sibyl.

Glance back first to the Hellespontic, noting the close fillet, and the cloth bound below the face, and then you will be prepared to understand the last I shall show you, and the loveliest of the southern Pythonesses.

42. A less deep thinker than Botticelli would have made her parched with thirst, and burnt with heat. But the voice of God, through nature, to the Arab or the Moor, is not in the thirst, but in the fountain,—not in the desert, but in the grass of it. And this Libyan Sibyl is the spirit of wild grass and flowers, springing in desolate places.

You see, her diadem is a wreath of them ; but the blossoms of it are not fastening enough for her hair, though it is not long yet—(she is only in reality a Florentine girl of fourteen or fifteen)—so the little darling knots it under her ears, and then makes herself a necklace of it. But though flowing hair and flowers are wild and pretty, Botticelli had not, in these only, got the power of Spring marked to his mind. Any girl might wear flowers ; but few, for ornament, would be likely to wear grass. So the Sibyl shall have grass in her diadem ; not merely interwoven and bending, but springing and strong. You thought it ugly and grotesque at first, did not you ? It was made so, because precisely what Botticelli wanted you to look at.

* A manufacturer wrote to me the other day, " We don't *want* to make smoke ! " Who said they did ?—a hired murderer does not want to commit murder, but does it for sufficient motive. (Even our shipowners don't want to drown their sailors ; they will only do it for sufficient motive.) If the dirty creatures *did* want to make smoke, there would be more excuse for them : and that they are not clever enough to consume it, is no praise to them. A man who can't help his hiccough leaves the room ; why do they not leave the England they pollute ?

SIBYLLA LIBI
CA

ECCE VENIENTEM DIEM
ET LATENTIA APERIEN
TEM TENEBIT GRENVO
GENTIVM REGINA



IDI VERRA CHEL ET TERNO Signore
LME DARA ALLE COSE NAS COSE
ELEGAMI IS CORA DEI NOSTRO ERRORE
FARA LE SINAGOGHE LUMINOS E
ESOLVERA EL LABRA AL PECHATORE
E FIE STADRA DI VTE LE COSE
ENGRENBO ALLA REINA DELLE GENTE
SE DRA QVESTORE SANTO EVNENTE

PLATE X.—GRASS OF THE DESERT.

But that's not all. This conical cap of hers, with one bead at the top,—considering how fond the Florentines are of graceful head-dresses, this seems a strange one for a young girl. But, exactly as I know the angel of Victory to be Greek, at his Mount of Pity, so I know this head-dress to be taken from a Greek coin, and to be meant for a Greek symbol. It is the Petasus of Hermes—the mist of morning over the dew. Lastly, what will the Libyan Sibyl say to you? The letters are large on her tablet. Her message is the oracle from the temple of the dew: “The dew of thy birth is as the womb of the morning.”—“*Ecce venientem diem, et latentia aperientem, tenebit gremio gentium regina.*”

43. Why the daybreak came not then, nor yet has come, but only a deeper darkness; and why there is now neither queen nor king of nations, but every man doing that which is right in his own eyes, I would fain go on, partly to tell you, and partly to meditate with you: but it is not our work for to-day. The issue of the Reformation which these great painters, the scholars of Dante, began, we may follow, farther, in the study to which I propose to lead you, of the lives of Cimabue and Giotto, and the relation of their work at Assisi to the chapel and chambers of the Vatican.

44. To-day let me finish what I have to tell you of the style of southern engraving. What sudden bathos in the sentence, you think! So contemptible the question of style, then, in painting, though not in literature? You study the ‘style’ of Homer; the style, perhaps, of Isaiah; the style of Horace, and of Massillon. Is it so vain to study the style of Botticelli?

In all cases, it is equally vain, if you think of their style first. But know their purpose, and then, their way of speaking is worth thinking of. These apparently unfinished and certainly unfilled outlines of the Florentine,—clumsy work, as Vasari thought them,—as Mr. Otley and most of our English amateurs still think them,—are these good or bad engraving?

You may ask now, comprehending their motive, with some hope of answering or being answered rightly. And the an-

swer is, They are the finest gravers' work ever done yet by human hand. You may teach, by process of discipline and of years, any youth of good artistic capacity to engrave a plate in the modern manner ; but only the noblest passion, and the tenderest patience, will ever engrave one line like these of Sandro Botticelli.

45. Passion, and patience ! Nay, even these you may have to-day in England, and yet both be in vain. Only a few years ago, in one of our northern iron-foundries, a workman of intense power and natural art-faculty set himself to learn engraving ;—made his own tools ; gave all the spare hours of his laborious life to learn their use ; learnt it ; and engraved a plate which, in manipulation, no professional engraver would be ashamed of. He engraved his blast furnace, and the casting of a beam of a steam engine. This, to him, was the power of God,—it was his life.

No greater earnestness was ever given by man to promulgate a Gospel. Nevertheless, the engraving is absolutely worthless. The blast furnace *is not* the power of God ; and the life of the strong spirit was as much consumed in the flames of it, as ever driven slaves by the burden and heat of the day.

How cruel to say so, if he yet lives, you think ! No, my friends ; the cruelty will be in you, and the guilt, if, having been brought here to learn that God is your Light, you yet leave the blast furnace to be the only light of England.

It has been, as I said in the note above (p. 167), with extreme pain that I have hitherto limited my notice of our own great engraver and moralist, to the points in which the disadvantages of English art-teaching made him inferior to his trained Florentine rival. But, that these disadvantages were powerless to arrest or ignobly depress him ;—that however failing in grace and scholarship, he should never fail in truth or vitality ; and that the precision of his unerring hand *—

* I know no drawing so subtle as Bewick's, since the fifteenth century, except Holbein's and Turner's. I have been greatly surprised lately by the exquisite water-colour work in some of Stothard's smaller vignettes ; but he cannot set the line like Turner or Bewick.

his inevitable eye—and his rightly judging heart—should place him in the first rank of the great artists not of England only, but of all the world and of all time :—that *this* was possible to him, was simply because he lived a *country* life. Bewick himself, Botticelli himself, Apelles himself, and twenty times Apelles, condemned to slavery in the hellfire of the iron furnace, could have done—NOTHING. Absolute paralysis of all high human faculty *must* result from labour near fire. The poor engraver of the piston-rod had faculties—not like Bewick's, for if he had had those, he never would have endured the degradation ; but assuredly, (I know this by his work,) faculties high enough to have made him one of the most accomplished figure painters of his age. And they are scorched out of him, as the sap from the grass in the oven : while on his Northumberland hill-sides, Bewick grew into as stately life as their strongest pine.

And therefore, in words of his, telling consummate and unchanging truth concerning the life, honour, and happiness of England, and bearing directly on the points of difference between class and class which I have not dwelt on without need, I will bring these lectures to a close.

“ I have always, through life, been of opinion that there is no business of any kind that can be compared to that of a man who farms his own land. It appears to me that every earthly pleasure, with health, is within his reach. But numbers of these men (the old statesmen) were grossly ignorant, and in exact proportion to that ignorance they were sure to be offensively proud. This led them to attempt appearing above their station, which hastened them on to their ruin ; but, indeed, this disposition and this kind of conduct invariably leads to such results. There were many of these lairds on Tyneside ; as well as many who held their lands on the tenure of ‘ suit and service,’ and were nearly on the same level as the lairds. Some of the latter lost their lands (not fairly, I think) in a way they could not help ; many of the former, by their misdirected pride and folly, were driven into towns, to slide away into nothingness, and to sink into oblivion, while their ‘ ha’ houses’ (halls), that ought to have remained in their families

from generation to generation, have mouldered away. I have always felt extremely grieved to see the ancient mansions of many of the country gentlemen, from somewhat similar causes, meet with a similar fate. The gentry should, in an especial manner, prove by their conduct that they are guarded against showing any symptom of foolish pride, at the same time that they soar above every meanness, and that their conduct is guided by truth, integrity, and patriotism. If they wish the people to partake with them in these good qualities, they must set them the example, without which no real respect can ever be paid to them. Gentlemen ought never to forget the respectable station they hold in society, and that they are the natural guardians of public morals and may with propriety be considered as the head and the heart of the country, while 'a bold peasantry' are, in truth, the arms, the sinews, and the strength of the same; but when these last are degraded, they soon become dispirited and mean, and often dishonest and useless.

* . * . * . * . * . *

"This singular and worthy man * was perhaps the most invaluable acquaintance and friend I ever met with. His moral lectures and advice to me formed a most important succedaneum to those imparted by my parents. His wise remarks, his detestation of vice, his industry, and his temperance,

* Gilbert Gray, bookbinder. I have to correct the inaccurate—and very harmfully inaccurate, expression which I used of Bewick, in Love's Meinie, 'a printer's lad at Newcastle.' His first master was a goldsmith and engraver, else he could never have been an artist. I am very heartily glad to make this correction, which establishes another link of relation between Bewick and Botticelli; but my error was partly caused by the impression which the above description of his "most invaluable friend" made on me, when I first read it.

Much else that I meant to correct, or promised to explain, in this lecture, must be deferred to the Appendix; the superiority of the Tuscan to the Greek Aphrodite I may perhaps, even at last, leave the reader to admit or deny as he pleases, having more important matters of debate on hand. But as I mean only to play with Proserpina during the spring, I will here briefly anticipate a statement I mean in the Appendix to enforce, namely, of the extreme value of coloured copies by hand, of paintings whose excellence greatly consists in colour, as auxiliary to en-

crowned with a most lively and cheerful disposition, altogether made him appear to me as one of the best of characters. In his workshop I often spent my winter evenings. This was also the case with a number of young men who might be considered as his pupils; many of whom, I have no doubt, he directed into the paths of truth and integrity, and who revered his memory through life. He rose early to work, lay down when he felt weary, and rose again when refreshed. His diet was of the simplest kind; and he ate when hungry, and drank when dry, without paying regard to meal-times. By steadily pursuing this mode of life he was enabled to accumulate sums of money—from ten to thirty pounds. This enabled him to get books, of an entertaining and moral tendency, printed and circulated at a cheap rate. His great object was, by every possible means, to promote honourable feelings in the minds of youth, and to prepare them for becoming good members of society. I have often discovered that he did not overlook ingenious mechanics, whose misfortunes—perhaps mismanagement—had led them to a lodging in Newgate. To these he directed his compassionate eye, and for the deserving (in his estimation), he paid their debt, and set them at liberty. He felt hurt at seeing the hands of an ingenious man tied up in

gravings of them. The prices now given without hesitation for nearly worthless original drawings by first-rate artists, would obtain for the misguided buyers, in something like a proportion of ten to one, most precious copies of drawings which can only be represented at all in engraving by entire alteration of their treatment, and abandonment of their finest purposes. I feel this so strongly that I have given my best attention, during upwards of ten years, to train a copyist to perfect fidelity in rendering the work of Turner; and having now succeeded in enabling him to produce facsimilies so close as to look like replicas, facsimilies which I must sign with my own name and his, in the very work of them, to prevent their being sold for real Turner vignettes, I can obtain no custom for him, and am obliged to leave him to make his bread by any power of captivation his original sketches may possess in the eyes of a public which maintains a nation of copyists in Rome, but is content with black and white renderings of great English art; though there is scarcely one cultivated English gentleman or lady who has not been twenty times in the Vatican, for once that they have been in the National Gallery.

prison, where they were of no use either to himself or to the community. This worthy man had been educated for a priest ; but he would say to me, ‘ Of a “trouth,” Thomas, I did not like their ways.’ So he gave up the thoughts of being a priest, and bent his way from Aberdeen to Edinburgh, where he engaged himself to Allan Ramsay, the poet, then a bookseller at the latter place, in whose service he was both shopman and bookbinder. From Edinburgh he came to Newcastle. Gilbert had had a liberal education bestowed upon him. He had read a great deal, and had reflected upon what he had read. This, with his retentive memory, enabled him to be a pleasant and communicative companion. I lived in habits of intimacy with him to the end of his life ; and, when he died, I, with others of his friends, attended his remains to the grave at the Ballast Hills.”

And what graving on the sacred cliffs of Egypt ever honoured them, as that grass-dimmed furrow does the mounds of our Northern land ?

NOTES.

I. The following letter, from one of my most faithful readers, corrects an important piece of misinterpretation in the text. The waving of the reins must be only in sign of the fluctuation of heat round the Sun's own chariot :—

“Spring Field, Ambleside,
“February 11, 1875.

“Dear Mr. Ruskin,—Your fifth lecture on Engraving I have to hand.

“Sandro intended those wavy lines meeting under the Sun's right * hand, (Plate V.) primarily, no doubt, to represent the four ends of the four reins dangling from the Sun's hand. The flames and rays are seen to continue to radiate from the platform of the chariot between and beyond these ends of the reins, and over the knee. He may have wanted to acknowledge that the warmth of the earth was Apollo's, by making these ends of the reins spread out separately and wave, and thereby enclose a form like a flame. But I cannot think it.

“Believe me,

“Ever yours truly,

CHAS. WM. SMITH.”

II. I meant to keep labyrinthine matters for my Appendix ; but the following most useful byewords from Mr. Tyrrwhitt had better be read at once :—

“In the matter of Cretan Labyrinth, as connected by Vir-

* “Would not the design have looked better, to us, on the plate than on the print ? On the plate, the reins would be in the left hand ; and the whole movement be from the left to the right ? The two different forms that the radiance takes would symbolize respectively heat and light, would they not ? ”

gil with the Ludus Trojæ, or equestrian game of winding and turning, continued in England from twelfth century; and having for last relic the maze * called 'Troy Town,' at Troy farm, near Somerton, Oxfordshire, which itself resembles the circular labyrinth on a coin of Cnossus in 'Fors Clavigera.'

"The connecting quotation from Virg., *Æn.*, v., 588, is as follows:

'Ut quondam Creta fertur Labyrinthus in alta
Parietibus textum cæcis iter, ancipitemque
Mille viis habuisse dolum, qua signa sequendi.
Falleret indeprensus et inremeabilis error.
Haud alio Teucrion nati vestigia cursu
Impediunt, texuntque fagas et prælia ludo,
Delphinum similes.'"

Labyrinth of Ariadne, as cut on the Downs by shepherds from time immemorial,—

Shakspeare, 'Midsummer Night's Dream,' Act ii. sc. 2:

"*Oberon.* The nine-men's morris† is filled up with mud;
And the quaint mazes in the wanton green
By lack of tread are undistinguishable."

The following passage, 'Merchant of Venice,' Act iii., sc. 2, confuses (to all appearance) the Athenian tribute to Crete, with the story of Hesione: and may point to general confusion in the Elizabethan mind about the myths:

"*Portia.* with much more love
Than young Alcides, when he did reduce
The virgin-tribute paid by howling Troy
To the sea monster."‡

Theseus is the Attic Hercules, however; and Troy may have been a sort of house of call for mythical monsters, in the view of midland shepherds.

* Strutt, pp 97-8, ed. 1801.

† Explained as "a game still played by the shepherds, cowkeepers," etc., in the midland counties.

‡ See *Iliad*, 20, 145.



O RE DE RE OSIGNOR DESIGNORI
 CHE NELLO ETERNO REGGI SEMPRESOLO
 ECHE CHORREGGI TVTTI ENOSTRI ERRORI
 STANDO ASSEDEPE SVNELSVTERNO PCLO
 OMELODIA DE GLANC'ELICI CHORI
 ASCHOLTA VNPOCHO EL NOSTRO AMARO
 EVIENI E REGGI NOI ORE ALTISSIMO
 COLTVO AMORECHEE TANTO DOLORE

APPENDIX.

ARTICLE I.

NOTES ON THE PRESENT STATE OF ENGRAVING IN ENGLAND.

I HAVE long deferred the completion of this book, because I had hoped to find time to show, in some fulness, the grounds for my conviction that engraving, and the study of it, since the development of the modern finished school, have been ruinous to European knowledge of art. But I am more and more busied in what I believe to be better work, and can only with extreme brevity state here the conclusions of many years' thought.

These, in several important particulars, have been curiously enforced on me by the carelessness shown by the picture dealers about the copies from Turner which it has cost Mr. Ward and me * fifteen years of study together to enable ourselves to make. "They are only copies," say they,—“nobody will look at them.”

It never seems to occur even to the most intelligent persons that an engraving also is ‘only a copy,’ and a copy done with refusal of colour, and with disadvantage of means in rendering shade. But just because this utterly inferior copy can be reduplicated, and introduces a different kind of skill in another material, people are content to lose all the composition, and all the charm, of the original,—so far as these depend on the chief gift of a *painter*,—colour; while they are gradually misled into attributing to the painter himself qualities impertinently added by the engraver to make his plate popular: and, which is far worse, they are as gradually and

* See note to the close of this article, p. 152.

subtly prevented from looking, in the original, for the qualities which engraving could never render. Further, it continually happens that the very best colour-compositions engrave worst; for they often extend colours over great spaces at equal pitch, and the green is as dark as the red, and the blue as the brown; so that the engraver can only distinguish them by lines in different directions, and his plate becomes a vague and dead mass of neutral tint; but a bad and forced piece of colour, or a piece of work of the Bolognese school, which is everywhere black in the shadows, and colourless in the lights, will engrave with great ease, and appear spirited and forcible. Hence engravers, as a rule, are interested in reproducing the work of the worst schools of painting.

Also, the idea that the merit of an engraving consisted in light and shade, has prevented the modern masters from even attempting to render works dependent mainly on outline and expression; like the early frescoes, which should indeed have been the objects of their most attentive and continual skill: for outline and expression are entirely within the scope of engraving; and the scripture histories of an aisle of a cloister might have been engraved to perfection, with little more pains than are given by ordinary workmen to round a limb by Correggio, or imitate the texture of a dress by Sir Joshua,—and both, at last, inadequately.

I will not lose more time in asserting or lamenting the mischief arising out of the existing system: but will rapidly state what the public should now ask for.

1. Exquisitely careful engraved outlines of all remaining frescoes of the thirteenth, fourteenth, and fifteenth centuries in Italy, with so much pale tinting as may be explanatory of their main masses; and with the local darks and local lights brilliantly relieved. The Arundel Society have published some meritorious plates of this kind from Angelico,—not, however, paying respect enough to the local colours, but conventionalizing the whole too much into outline.

2. Finished small plates for book illustration. The cheap woodcutting and etching of popular illustrated books have been endlessly mischievous to public taste: they first obtained

their power in a general reaction of the public mind from the insipidity of the lower school of line engraving, brought on it by servile persistence in hack work for ignorant publishers. The last dregs of it may still be seen in the sentimental landscapes engraved for cheap ladies' pocket-books. But the woodcut can never, educationally, take the place of serene and accomplished line engraving; and the training of young artists in whom the gift of delineation prevails over their sense of colour, to the production of scholarly, but small plates, with their utmost honour of skill, would give a hitherto unconceived dignity to the character and range of our popular literature.

3. Vigorous mezzotints from pictures of the great masters, which originally present noble contrasts of light and shade. Many Venetian works are magnificent in this character.

4. Original design by painters themselves, decisively engraved in few lines—(*not etched*); and with such insistence by dotted work on the main contours as we have seen in the examples given from Italian engraving.

5. On the other hand, the men whose quiet patience and exquisite manual dexterity are at present employed in producing large and costly plates, such as that of the *Belle Jardinière de Florence*, by M. Boucher Desnoyers, should be entirely released from their servile toil, and employed exclusively in producing coloured copies, or light drawings, from the original work. The same number of hours of labour, applied with the like conscientious skill, would multiply precious likenesses of the real picture, full of subtle veracities which no steel line could approach, and conveying, to thousands, true knowledge and unaffected enjoyment of painting; while the finished plate lies uncared for in the portfolio of the virtuoso, serving only, so far as it is seen in the print-seller's window by the people, to make them think that sacred painting must always be dull, and unnatural.

I have named the above engraving, because, for persons wishing to study the present qualities and methods of line-work, it is a pleasant and sufficient possession, uniting every variety of texture with great serenity of unforced effect, and

exhibiting every possible artifice and achievement in the distribution of even and rugged, or of close and open line ; artifices for which,—while I must yet once more and emphatically repeat that they are illegitimate, and could not be practised in a revived school of classic art,—I would fain secure the reader's reverent admiration, under the conditions exacted by the school to which they belong. Let him endeavour, with the finest point of pen or pencil he can obtain, to imitate the profile of this Madonna in its relief against the grey background of the water surface ; let him examine, through a good lens, the way in which the lines of the background are ended in a lance-point as they approach it ; the exact equality of depth of shade being restored by inserted dots, which prepare for the transition to the manner of shade adopted in the flesh : then let him endeavour to trace with his own hand some of the curved lines at the edge of the eyelid, or in the rounding of the lip ; or if these be too impossible, even a few of the quiet undulations which gradate the folds of the hood behind the hair ; and he will, I trust, begin to comprehend the range of delightful work which would be within the reach of such an artist, employed with more tractable material on more extended subject.

If, indeed, the present system were capable of influencing the mass of the people, and enforcing among them the subtle attention necessary to appreciate it, something might be pleaded in defence of its severity. But all these plates are entirely above the means of the lower middle classes, and perhaps not one reader in a hundred can possess himself, for the study I ask of him, even of the plate to which I have just referred. What, in the stead of such, he can and does possess, let him consider,—and, if possible, just after examining the noble qualities of this conscientious engraving.

Take up, for an average specimen of modern illustrated works, the volume of Dickens's '*Master Humphrey's Clock*,' containing '*Barnaby Rudge*.'

You have in that book an entirely profitless and monstrous story, in which the principal characters are a coxcomb, an idiot, a madman, a savage blackguard, a foolish tavern-keeper, a mean

old maid, and a conceited apprentice,—mixed up with a certain quantity of ordinary operative pastoral stuff, about a pretty Dolly in ribands, a lover with a wooden leg, and an heroic locksmith. For these latter, the only elements of good, or life, in the filthy mass of the story,* observe that the author must filch the wreck of those old times of which we fiercely and frantically destroy every living vestige, whenever it is possible. You cannot have your Dolly Varden brought up behind the counter of a railway station; nor your jolly locksmith trained at a Birmingham brass-foundry. And of these materials, observe that you can only have the ugly ones illustrated. The cheap popular art cannot draw for you beauty, sense, or honesty; and for Dolly Varden, or the locksmith, you will look through the vignettes in vain. But every species of distorted folly and vice,—the idiot, the blackguard, the coxcomb, the paltry fool, the degraded woman,—are pictured for your honorable pleasure in every page, with clumsy caricature, struggling to render its dulness tolerable by insisting on defect,—if perchance a penny or two more may be coined out of the Cockney reader's itch for loathsomeness.

Or take up, for instance of higher effort, the 'Cornhill Magazine' for this month, July, 1876. It has a vignette of Venice for an illuminated letter. That is what your decorative art has become, by help of Kensington! The letter to be produced is a T. There is a gondola in the front of the design, with the canopy slipped back to the stern like a saddle over a horse's tail. There is another in the middle distance, all gone to seed at the prow, with its gondolier emaciated into an oar, at the stern; then there is a Church of the Salute, and a Ducal palace,—in which I beg you to observe all the felicity and dexterity of modern cheap engraving; finally, over the Ducal palace there is something, I know not in the least what meant for, like an umbrella dropping out of a balloon, which is the ornamental letter T. Opposite this ornamental design, there is an engraving of two young ladies and a parasol, between

* The raven, however, like all Dickens's animals, is perfect; and I am the more angry with the rest because I have every now and then to open the book to look for him.

two trunks of trees. The white face and black feet of the principal young lady, being the points of the design, are done with as much care,—not with as much dexterity,—as an ordinary sketch of Dumourier's in *Punch*. The young lady's dress, the next attraction, is done in cheap white and black cutting, with considerably less skill than that of any ordinary tailor's or milliner's shop-book pattern drawing. For the other young lady, and the landscape, take your magnifying glass, and look at the hacked wood that forms the entire shaded surface—one mass of idiotic scrabble, without the remotest attempt to express a single leaf, flower, or clod of earth. It is such landscape as the public sees out of its railroad window at sixty miles of it in the hour,—and good enough for such a public.

Then turn to the last—the poetical plate, p. 122 : “Lifts her—lays her down with care.” Look at the gentleman with the spade, promoting the advance, over a hillock of hay, of the reposing figure in the black-sided tub. Take your magnifying glass to *that*, and look what a dainty female arm and hand your modern scientific and anatomical schools of art have provided you with ! Look at the tender horizontal flux of the sea round the promontory point above. Look at the tender engraving of the linear light on the divine horizon, above the ravenous sea-gull. Here is Development and Progress for you, from the days of Perugino's horizon, and Dante's daybreaks ! Truly, here it seems

“Si che le bianche e le vermiglie guance
Per troppa etate divenivan rance.”

I have chosen no gross or mean instances of modern work. It is one of the saddest points connected with the matter that the designer of this last plate is a person of consummate art faculty, but bound to the wheel of the modern Juggernaut, and broken on it. These woodcuts, for ‘*Barnaby Rudge*’ and the ‘*Cornhill Magazine*,’ are favourably representative of the entire illustrative art industry of the modern press,—industry enslaved to the ghastly service of catching the last gleams in the glued eyes of the daily more bestial English mob,—rail-

road born and bred, which drags itself about the black world it has withered under its breath, in one eternal grind and shriek,—gobbling,—staring,—chattering,—giggling,—trampling out every vestige of national honour and domestic peace, wherever it sets the staggering hoof of it ; incapable of reading, of hearing, of thinking, of looking,—capable only of greed for money, lust for food, pride of dress, and the prurient itch of momentary curiosity for the politics last announced by the newsmonger, and the religion last rolled by the chemist into electuary for the dead.

In the miserably competitive labour of finding new stimulus for the appetite—daily more gross—of this tyrannous mob, we may count as lost, beyond any hope, the artists who are dull, docile, or distressed enough to submit to its demands ; and we may count the dull and the distressed by myriads ;—and among the docile, many of the best intellects we possess. The few who have sense and strength to assert their own place and supremacy, are driven into discouraged disease by their isolation, like Turner and Blake ; the one abandoning the design of his ‘*Liber Studiorum*’ after imperfectly and sadly, against total public neglect, carrying it forward to what it is,—monumental, nevertheless, in landscape engraving ; the other producing, with one only majestic series of designs from the book of Job, nothing for his life’s work but coarsely iridescent sketches of enigmatic dream.

And, for total result of our English engraving industry during the last hundred and fifty years, I find that practically at this moment I cannot get a *single* piece of true, sweet, and comprehensible art, to place for instruction in any children’s school ! I can get, for ten pounds apiece, well-engraved portraits of Sir Joshua’s beauties showing graceful limbs through flowery draperies ; I can get—dirt-cheap—any quantity of Dutch flats, ditches, and hedges, enlivened by cows chewing the cud, and dogs behaving indecently ; I can get heaps upon heaps of temples, and forums, and altars, arranged as for academical competition, round seaports, with curled-up ships that only touch the water with the middle of their bottoms. I can get, at the price of lumber, any quantity of British

squires flourishing whips and falling over hurdles ; and, in suburban shops, a dolorous variety of widowed mothers nursing babies in a high light, with the Bible on a table, and baby's shoes on a chair. Also, of cheap prints, painted red and blue, of Christ blessing little children, of Joseph and his brethren, the infant Samuel, or Daniel in the lion's den, the supply is ample enough to make every child in these islands think of the Bible as a somewhat dull story-book, allowed on Sunday ;—but of trained, wise, and worthy art, applied to gentle purposes of instruction, no single example can be found in the shops of the British printseller or bookseller. And after every dilettante tongue in European society has filled drawing-room and academy alike with idle clatter concerning the divinity of Raphael and Michael Angelo, for these last hundred years, I cannot at this instant, for the first school which I have some power of organizing under St. George's laws, get a good print of Raphael's Madonna of the tribune, or an ordinarily intelligible view of the side and dome of St. Peter's !

And there are simply no words for the mixed absurdity and wickedness of the present popular demand for art, as shown by its supply in our thoroughfares. Abroad, in the shops of the Rue de Rivoli, brightest and most central of Parisian streets, the putrescent remnant of what was once Catholicism promotes its poor gilded pedlars' ware of nativity and crucifixion into such honourable corners as it can find among the more costly and studious illuminations of the brothel : and although, in Pall Mall, and the Strand, the large-margined Landseer,—Stanfield,—or Turner-proofs, in a few stately windows, still represent, uncared-for by the people, or inaccessible to them, the power of an English school now wholly perished,—these are too surely superseded, in the windows that stop the crowd, by the thrilling attraction with which Doré, Gérôme, and Tadema have invested the gambling table, the duelling ground, and the arena ; or by the more material and almost tangible truth with which the apothecary-artist stereographs the stripped actress, and the railway mound.

Under these conditions, as I have now repeatedly asserted,

no professorship, nor school, of art can be of the least use to the general public. No race can understand a visionary landscape, which blasts its real mountains into ruin, and blackens its river-beds with foam of poison. Nor is it of the least use to exhibit ideal Diana at Kensington, while substantial Phryne may be worshipped in the Strand. The only recovery of our art-power possible,—nay, when once we know the full meaning of it, the only one desirable,—must result from the purification of the nation's heart, and chastisement of its life : utterly hopeless now, for our adult population, or in our large cities, and their neighbourhood. But, so far as any of the sacred influence of former design can be brought to bear on the minds of the young, and so far as, in rural districts, the first elements of scholarly education can be made pure, the foundation of a new dynasty of thought may be slowly laid. I was strangely impressed by the effect produced in a provincial seaport school for children, chiefly of fishermen's families, by the gift of a little coloured drawing of a single figure from the *Paradise* of Angelico in the *Accademia* of Florence. The drawing was wretched enough seen beside the original : I had only bought it from the poor Italian copyist for charity ; but, to the children, it was like an actual glimpse of heaven ; they rejoiced in it with pure joy, and their mistress thanked me for it more than if I had sent her a whole library of good books. Of such copies, the grace-giving industry of young girls, now worse than lost in the spurious charities of the bazaar, or selfish ornamentations of the drawing-room, might, in a year's time, provide enough for every dame-school in England ; and a year's honest work of the engravers employed on our base novels, might represent to our advanced students every frescoed legend of philosophy and morality extant in Christendom.

For my own part, I have no purpose, in what remains to me of opportunity, either at Oxford or elsewhere, to address any farther course of instruction towards the development of existing schools. After seeing the stream of the Teviot as black as ink, and a putrid carcase of a sheep lying in the dry channel of the Jed, under Jedburgh Abbey, (the entire strength

of the summer stream being taken away to supply a single mill,) I know, finally, what value the British mind sets on the 'beauties of nature,' and shall attempt no farther the excitement of its enthusiasm in that direction. I shall indeed endeavour to carry out, with Mr. Ward's help, my twenty year's held purpose of making the real character of Turner's work known, to the persons who, formerly interested by the engravings from him, imagined half the merit was of the engraver's giving. But I know perfectly that to the general people, trained in the midst of the ugliest objects that vice can design, in houses, mills, and machinery, *all* beautiful form and colour is as invisible as the seventh heaven. It is not a question of appreciation at all; the thing is physically invisible to them, as human speech is inaudible during a steam whistle.

And I shall also use all the strength I have to convince those, among our artists of the second order, who are wise and modest enough not to think themselves the matches of Turner or Michael Angelo, that in the present state of art they only waste their powers in endeavouring to produce original pictures of human form or passion. Modern aristocratic life is too vulgar, and modern peasant life too unhappy, to furnish subjects of noble study; while, even were it otherwise, the multiplication of designs by painters of second-rate power is no more desirable than the writing of music by inferior composers. They may, with far greater personal happiness, and incalculably greater advantage to others, devote themselves to the affectionate and sensitive copying of the works of men of just renown. The dignity of this self-sacrifice would soon be acknowledged with sincere respect, for copies produced by men working with such motive would differ no less from the common trade-article of the galleries than the rendering of music by an enthusiastic and highly-trained executant differs from the grinding of a street organ. And the change in the tone of the public feeling, produced by familiarity with such work, would soon be no less great than in their musical enjoyment, if having been accustomed only to hear black Christys, blind fiddlers, and hoarse beggars scrape or howl about their

streets, they were permitted daily audience of faithful and gentle orchestral rendering of the work of the highest classical masters.

I have not, until very lately, rightly appreciated the results of the labour of the Arundel Society in this direction. Although, from the beginning, I have been honoured in being a member of its council, my action has been hitherto rather of check than help, because I thought more of the differences between our copies and the great originals, than of their unquestionable superiority to anything the public could otherwise obtain.

I was practically convinced of their extreme value only this last winter, by staying at the house of a friend in which the Arundel engravings were the principal decoration; and where I learned more of Masaccio from the Arundel copy of the contest with Simon Magus, than in the Brancacci chapel itself; for the daily companionship with the engraving taught me subtleties in its composition which had escaped me in the multitudinous interest of visits to the actual fresco.

But the work of the Society has been sorely hindered hitherto, because it has had at command only the skill of copyists trained in foreign schools of colour, and accustomed to meet no more accurate requisitions than those of the fashionable traveller. I have always hoped for, and trust at last to obtain, co-operation with our too mildly laborious copyists, of English artists possessing more brilliant colour faculty; and the permission of our subscribers to secure for them the great ruins of the noble past, undesecrated by the trim, but treacherous, plastering of modern emendation.

Finally, I hope to direct some of the antiquarian energy often to be found remaining, even when love of the picturesque has passed away, to encourage the accurate delineation and engraving of historical monuments, as a direct function of our schools of art. All that I have generally to suggest on this matter has been already stated with sufficient clearness in the first of my inaugural lectures at Oxford: and my forthcoming '*Elements of Drawing*,' will contain all the directions I can give in writing as to methods of work for such purpose. The

publication of these has been hindered, for at least a year, by the abuses introduced by the modern cheap modes of printing engravings. I find the men won't use any ink but what pleases them, nor print but with what pressure pleases them ; and if I can get the foreman to attend to the business, and choose the ink right, the men change it the moment he leaves the room, and threaten to throw up the job when they are detected. All this, I have long known well, is a matter of course, in the outcome of modern principles of trade ; but it has rendered it hitherto impossible for me to produce illustrations, which have been ready, as far as my work or that of my own assistants is concerned, for a year and a half. Any one interested in hearing of our progress—or arrest, may write to my Turner copyist, Mr. Ward : * and, in the meantime, they can help my designs for art education best by making these Turner copies more generally known ; and by determining, when they travel, to spend what sums they have at their disposal, not in fady photography, but in the encouragement of any good *water-colour* and *pencil* draughtsmen whom they find employed in the *galleries* of Europe.

ARTICLE II.

DETACHED NOTES.

I.

On the series of Sibyl engravings attributed to Botticelli.

SINCE I wrote the earlier lectures in this volume, I have been made more doubtful on several points which were embarrassing enough before, by seeing some better, (so-called,) impres-

* 2, Church Terrace, Richmond, Surrey. NOTE.—I have hitherto permitted Mr. Ward to copy any Turner drawing he was asked to do ; but, finding there is a run upon the vignettes of Loch Lomond and Derwent, I have forbidden him to do more of them for the present, lest his work should get the least mechanical. The admirable drawings of Venice, by my good assistant Mr. Bunney, resident there, will become of more value to their purchasers every year, as the buildings from



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sions of my favourite plates, containing light and shade which did not improve them.

I do not choose to waste time or space in discussion, till I know more of the matter; and that more I must leave to my good friend Mr. Reid of the British Museum to find out for me; for I have no time to take up the subject myself, but I give, for frontispiece to this Appendix, the engraving of Joshua referred to in the text, which however beautiful in thought, is an example of the inferior execution and more elaborate shade which puzzle me. But whatever is said in the previous pages of the plates chosen for example, by whomsoever done, is absolutely trustworthy. Thoroughly fine they are, in their existing state, and exemplary to all persons and times. And of the rest, in fitting place I hope to give complete—or at least satisfactory account.

II.

On the three excellent engravers representative of the first, middle, and late schools.

I have given opposite a photograph, slightly reduced from the Durer Madonna, alluded to often in the text, as an example of his best conception of womanhood. It is very curious that Durer, the least able of all great artists to represent womanhood, should of late have been a very principal object of feminine admiration. The last thing a woman should do is to write about art. They never see anything in pictures but what they are told, (or resolve to see out of contradiction,)—or the particular things that fall in with their own feelings. I saw a curious piece of enthusiastic writing by an Edinburgh lady, the other day, on the photographs I had taken from the tower of Giotto. She did not care a straw what Giotto had meant by them, declared she felt it her duty only to announce

which they are made are destroyed. I was but just in time, working with him at Verona, to catch record of Fra Giocondo's work in the smaller square; the most beautiful Renaissance design in North Italy.

what they were to *her* ; and wrote two pages on the bas-relief of Heracles and Antæus—assuming it to be the death of Abel.

It is not, however, by women only that Durer has been over-praised. He stands so alone in his own field, that the people who care much for him generally lose the power of enjoying anything else rightly ; and are continually attributing to the force of his imagination quaintnesses which are merely part of the general mannerism of his day.

The following notes upon him, in relation to two other excellent engravers, were written shortly for extempore expansion in lecturing. I give them, with the others in this terminal article, mainly for use to myself in future reference ; but also as more or less suggestive to the reader, if he has taken up the subject seriously, and worth, therefore, a few pages of this closing sheet.

The men I have named as representative of all the good ones composing their school, are alike resolved their engraving shall be lovely.

But Botticelli, the ancient, wants, with as little engraving, as much Sibyl as possible.

Durer, the central, wants, with as much engraving as possible, anything of Sibyl that may chance to be picked up with it.

Beaugrand, the modern, wants, as much Sibyl as possible, and as much engraving too.

I repeat—for I want to get this clear to you—Botticelli wants, with as little engraving, as much Sibyl as possible. For his head is full of Sibyls, and his heart. He can't draw them fast enough ; one comes, and another, and another ; and all, gracious and wonderful and good, to be engraved for ever, if only he had a thousand hands and lives. He scratches down one, with no haste, with no fault, divinely careful, scrupulous, patient, but with as few lines as possible. 'Another Sibyl—let me draw another for heaven's sake, before she has burnt all her books, and vanished.'

Durer is exactly Botticelli's opposite. He is a workman, to the heart, and will do his work magnificently. 'No matter what I do it on, so that my craft be honourably shown. Any-

thing will do ; a Sibyl, a skull, a Madonna and Christ, a hat and a feather, an Adam, an Eve, a cock, a sparrow, a lion with two tails, a pig with five legs,—anything will do for me. But see if I don't show you what engraving is, be my subject what it may'!

Thirdly : Beaugrand, I said, wants as much Sibyl as possible, and as much engraving. He is essentially a copyist, and has no ideas of his own, but deep reverence and love for the work of others. He will give his life to represent another man's thought. He will do his best with every spot and line,—exhibit to you, if you will only look, the most exquisite completion of obedient skill ; but will be content, if you will not look, to pass his neglected years in fruitful peace, and count every day well spent that has given softness to a shadow, or light to a smile.

III.

On Durer's landscape, with reference to the sentence in p. 112 :
 "I hope you are pleased."

I spoke just now only of the ill-shaped body of this figure of Fortune, or Pleasure. Beneath her feet is an elaborate landscape. It is all drawn out of Durer's head ;—he would look at bones or tendons carefully, or at the leaf details of foreground ;—but at the breadth and loveliness of real landscape, never.

He has tried to give you a bird's-eye view of Germany ; rocks, and woods, and clouds, and brooks, and the pebbles in their beds, and mills, and cottages, and fences, and what not ; but it is all a feverish dream, ghastly and strange, a monotone of diseased imagination.

And here is a little bit of the world he would not look at—of the great river of his land, with a single cluster of its reeds, and two boats, and an island with a village, and the way for the eternal waters opened between the rounded hills.*

* The engraving of Turner's "Scene on the Rhine" (near Bingen?) with boats on the right, and reedy foreground on left ; the opening

It is just what you may see any day, anywhere,—innocent, seemingly artless; but the artlessness of Turner is like the face of Gainsborough's village girl, and a joy forever.

IV.

On the study of anatomy.

The virtual beginner of artistic anatomy in Italy was a man called 'The Poulterer'—from his grandfather's trade; 'Pollajuolo,' a man of immense power, but on whom the curse of the Italian mind in this age* was set at its deepest.

Any form of passionate excess has terrific effects on body and soul, in nations as in men; and when this excess is in rage, and rage against your brother, and rage accomplished in habitual deeds of blood,—do you think Nature will forget to set the seal of her indignation upon the forehead? I told you that the great division of spirit between the northern and southern races had been reconciled in the Val d'Arno. The Font of Florence, and the Font of Pisa, were as the very springs of the life of the Christianity which had gone forth to teach all nations, baptizing them in the name of the Prince of Peace. Yet these two brother cities were to each other—I do not say as Abel and Cain, but as Eteocles and Polynices, and the words of Æschylus are now fulfilled in them to the uttermost. The Arno baptizes their dead bodies:—their native valley between its mountains is to them as the furrow of a grave;—"and so much of their land they have, as is sepulchre." Nay, not of Florence and Pisa only was this true: Venice and Genoa died in death-grapple; and eight cities of Lombardy divided between them the joy of levelling Milan to her lowest stone. Nay, not merely in city against city, but in

between its mountain banks in central distance. It is exquisitely engraved, the plate being of the size of the drawing, about ten inches by six, and finished with extreme care and feeling.

* See the horrible picture of St. Sebastian by him in our own National Gallery.

street against street, and house against house, the fury of the Theban dragon flamed ceaselessly, and with the same excuse upon men's lips. The sign of the shield of Polynices, Justice bringing back the exile, was to them all, in turn, the portent of death : and their history, in the sum of it and substance, is as of the servants of Joab and Abner by the pool of Gibeon. "They caught every one his fellow by the head, and thrust his sword in his fellow's side ; so they fell down together : wherefore that place was called 'the field of the strong men.' "

Now it is not possible for Christian men to live thus, except under a fever of insanity. I have before, in my lectures on Prudence and Insolence in art, deliberately asserted to you the logical accuracy of the term 'demoniacal possession'—the being in the power or possession of a betraying spirit ; and the definite sign of such insanity is delight in witnessing pain, usually accompanied by an instinct that gloats over or plays with physical uncleanness or disease, and always by a morbid egotism. It is not to be recognized for demoniacal power so much by its *viciousness*, as its *paltriness*,—the taking pleasure in minute, contemptible, and loathsome things.* Now, in the middle of the gallery of the Brera at Milan, there is an elaborate study of a dead Christ, entirely characteristic of early fifteenth century Italian madman's work. It is called—and was presented to the people as—a Christ ; but it is only an anatomical study of a vulgar and ghastly dead body, with the soles of the feet set straight at the spectator, and the rest foreshortened. It is either Castagno's or Mantegna's,—in my mind, set down to Castagno ; but I have not looked at the picture for years, and am not sure at this moment. It does not matter a straw which : it is exactly characteristic of the madness in which all of them—Pollajuolo, Castagno, Mantegna, Lionardo da Vinci, and Michael Angelo, polluted their work with the science of the sepulchre,† and degraded it with pre-

* As in the muscles of the legs and effort in stretching bows, of the executioners, in the picture just referred to.

† Observe, I entirely distinguish the study of *anatomy*—i.e., of intense bone and muscle—from study of the nude, as the Greeks practised

sumptuous and paltry technical skill. Foreshorten your Christ, and paint him, if you can, half putrefied,—that is the scientific art of the Renaissance.

It is impossible, however, in so vast a subject to distinguish always the beginner of things from the establisher. To the poulterer's son, Pollajuolo, remains the eternal shame of first making insane contest the only subject of art; but the two *establishers* of anatomy were Lionardo and Michael Angelo. You hear of Lionardo chiefly because of his Last Supper, but Italy did not hear of him for that. This was not what brought her to worship Lionardo—but the Battle of the Standard.

it. This for an entirely great painter is absolutely necessary; but yet I believe, in the case of Botticelli, it was nobly restricted. The following note by Mr. Tyrwhitt contains, I think, the probable truth:—

“The facts relating to Sandro Botticelli's models, or rather to his favourite model (as it appears to me), are but few; and it is greatly to be regretted that his pictures are seldom dated;—if it were certain in what order they appeared, what follows here might approach moral certainty.

“There is no doubt that he had great personal regard for Fra Filippo, up to that painter's death in 1469, Sandro being then twenty-two years old. He may probably have got only good from him; anyhow he would get a strong turn for Realism,—i.e., the treatment of sacred and all other subjects in a realistic manner. He is described in Crowe and Cavalcaselle from Filippino Lippi's Martyrdom of St. Peter, as a sullen and sensual man, with beetle brows, large fleshy mouth, etc., etc. Probably he was a strong man, and intense in physical and intellectual habit.

“This man, then, begins to paint in his strength, with conviction—rather happy and innocent than not—that it is right to paint any beautiful thing, and best to paint the most beautiful,—say in 1470, at twenty-three years of age. The allegorical Spring and the Graces, and the Aphrodite now in the Uffizi, were painted for Cosmo, and seem to be taken by Vasari and others as early, or early-central, works in his life: also the portrait of Simonetta Vespucci.¹ He is known to have painted much in early life for the Vespucci and the Medici;—and this daughter of the former house seems to have been innamorata or mistress of Giuliano de' Medici, murdered by the Pazzi in 1478. Now it seems agreed by Crowe and Cavalcaselle, Pater, etc., (and I am quite sure of it myself as to the pictures mentioned)—first, that the same slender and long-

¹ Pitti, Stanza di Prometeo, 348.

V.

Fragments on Holbein and others.

Of Holbein's St. Elizabeth, remember, she is not a perfect Saint Elizabeth, by any means. She is an honest and sweet German lady,—the best he could see ; he could do no better ; —and so I come back to my old story,—no man can do better than he sees : if he can reach the nature round him, it is well ; he may fall short of it ; he cannot rise above it ; “ the best, in this kind, are but shadows.”

* * * * * * *

Yet that intense veracity of Holbein is indeed the strength and glory of all the northern schools. They exist only in be-

throated model appears in Spring, the Aphrodite, Calumny, and other works.¹ Secondly, that she was Simonetta, the original of the Pitti portrait.

“ Now I think she must have been induced to let Sandro draw from her whole person undraped, more or less ; and that he must have done so as such a man probably would, in strict honour as to deed, word, and *definite* thought, but under occasional accessions of passion of which he said nothing, and which in all probability and by grace of God refined down to nil, or nearly so, as he got accustomed to look in honour at so beautiful a thing. (He may have left off the undraped after her death.) First, her figure is absolutely fine Gothic ; I don't think any antique is so slender. Secondly, she has the sad, passionate, and exquisite Lombard mouth. Thirdly, her limbs shrink together, and she seems not quite to have ‘ liked it,’ or been an accustomed model. Fourthly, there is tradition, giving her name to all those forms.

“ Her lover Giuliano was murdered in 1478, and Savonarola hanged and burnt in 1498. Now, can her distress, and Savonarola's preaching, between them, have taken, in few years, all the carnality out of Sandro, supposing him to have come already, by seventy-eight, to that state in which the sight of her delighted him, without provoking ulterior feelings ? All decent men accustomed to draw from the nude tell us they get to that.

“ Sandro's Dante is dated as published in 1482. He may have been saddening by that time, and weary of beauty, pure or mixed ;—though he went on painting Madonnas, I fancy. (Can Simonetta be traced in

¹ I think Zipporah may be a remembrance of her.

ing true. Their work among men is the definition of what is, and the abiding by it. They cannot dream of what is not. They make fools of themselves if they try. Think how feeble even Shakspeare is when he tries his hand at a Goddess;—women, beautiful and womanly,—as many as you choose; but who cares what his Minerva or Juno, say in the masque of the Tempest? And for the painters—when Sir Joshua tries for a Madonna, or Vandyke for a Diana—they can't even *paint*!

any of them? I think not. The Sistine paintings extend from 1481 to 1484, however. I cannot help thinking Zipporah is impressed with her.) After Savonarola's death, Sandro must have lost heart, and gone into Dante altogether. Most ways in literature and art lead to Dante; and this question about the nude and the purity of Botticelli is no exception to the rule.

"Now in the Purgatorio, Lust is the last sin of which we are to be made pure, and it has to be burnt out of us: being itself as searching as fire, as smouldering, devouring, and all that. *Corruptio optimi pessima*: and it is the most searching and lasting of evils, because it really is a corruption attendant on true Love, which is eternal—whatever the word means. That this is so, seems to me to demonstrate the truth of the Fall of Man from the condition of moral very-goodness in God's sight. And I think that Dante connected the purifying pains of his intermediate state with actual sufferings in this life, working out repentance,—in himself and others. And the 'torment' of this passion, to the repentant or resisting, or purity-seeking soul is decidedly like the pain of physical burning.

"Further, its casuistry is impracticable; because the more you stir the said 'fire,' the stronger hold it takes. Therefore, men and women are *rightly* secret about it, and detailed confessions unadvisable. Much talk about 'hypocrisy' in this matter is quite wrong and unjust. Then, its connexion with female beauty, as a cause of love between man and woman, seems to me to be the inextricable nodus of the Fall, the here inseparable mixture of good and evil, till soul and body are parted. For the sense of seen Beauty is the awakening of Love, at whatever distance from any kind of return or sympathy—as with a rose, or what not. Sandro may be the man who has gone nearest to the right separation of Delight from Desire: supposing that he began with religion and a straight conscience; saw lovingly the error of Fra Filippo's way; saw with intense distant love the error of Simonetta's; and reflected on Florence and *its* way, and drew nearer and nearer to Savonarola, being yet too big a man for asceticism; and finally wearied of all things, and sunk into poverty and peace."

they become total simpletons. Look at Rubens' mythologies in the Louvre, or at modern French heroics, or German pietisms! Why, all—Cornelius, Hesse, Overbeck, and David—put together, are not worth one De Hooghe of an old woman with a broom sweeping a back-kitchen. The one thing we north-erns can do is to find out what is fact, and insist on it: mean fact it may be, or noble,—but fact always, or we die.

Yet the intensest form of northern realization can be matched in the south, when the southernns choose. There are two pieces of animal drawing in the Sistine Chapel unrivalled for literal veracity. The sheep at the well in front of Zipporah; and afterwards, when she is going away, leading her children, her eldest boy, like every one else, has taken his chief treasure with him, and this treasure is his pet dog. It is a little sharp-nosed white fox-terrier, full of fire and life; but not strong enough for a long walk. So little Gershom, whose name was "the stranger" because his father had been a stranger in a strange land,—little Gershom carries his white terrier under his arm, lying on the top of a large bundle to make it comfortable. The doggie puts its sharp nose and bright eyes out, above his hand, with a little roguish gleam sideways in them, which means,—if I can read rightly a dog's expression,—that he has been barking at Moses all the morning, and has nearly put him out of temper:—and without any doubt, I can assert to you that there is not any other such piece of animal painting in the world,—so brief, intense, vivid, and absolutely balanced in truth; as tenderly drawn as if it had been a saint, yet as humorously as Landseer's Lord Chancellor poodle.

Oppose to Holbein's Veracity—Botticelli's Fantasy.

"	"	Shade	"	Colour.
"	"	Despair	"	Faith.
"	"	Grossness	"	Purity.

True Fantasy. Botticelli's Tree in Hellespontic Sibyl. Not a real tree at all—yet founded on intensest perception of beautiful reality. So the swan of Clio, as opposed to Durer's cock, or to Turner's swan.

The Italian power of abstraction into one mythologic personage—Holbein's death is only literal. He has to split his death into thirty different deaths ; and each is but a skeleton. But Orcagna's death is one—the power of death itself. There may thus be as much *breadth in thought*, as in execution.

* * * * *

What then, we have to ask, is a man *conscious of* in what he sees ?

For instance, in all Cruikshank's etchings—however slight the outline—there is an intense consciousness of light and shade, and of local colour, *as a part* of light and shade ; but none of colour itself. He was wholly incapable of colouring ; and perhaps this very deficiency enabled him to give graphic harmony to engraving.

* * * * *

Bewick—snow-pieces, etc. *Grey* predominant ; *perfect sense of colour*, coming out in patterns of birds ;—yet so uncultivated, that he engraves the brown birds better than pheasant or peacock !

For quite perfect consciousness of colour makes engraving impossible, and you have instead—Correggio.

VI.

Final notes on light and shade.

You will find in the 138th and 147th paragraphs of my inaugural lectures, statements which, if you were reading the book by yourselves, would strike you probably as each of them difficult, and in some degree inconsistent,—namely, that the school of colour has exquisite character and sentiment ; but is childish, cheerful, and fantastic ; while the school of shade is deficient in character and sentiment ; but supreme in intellect and veracity. “The way by light and shade,” I say, “is taken by men of the highest powers of thought and most earnest desire for truth.”

The school of shade, I say, is deficient in character and sentiment. Compare any of Durer's Madonnas with any of Angelico's.

Yet you may discern in the Apocalypse engravings that Durer's mind was seeking for truths, and dealing with questions, which no more could have occurred to Angelico's mind than to that of a two-years'-old baby.

The two schools unite in various degree ; but are always distinguishably generic, the two headmost masters representing each being Tintoret and Perugino. The one, deficient in sentiment, and continually offending us by the want of it, but full of intellectual power and suggestion.

The other, repeating ideas with so little reflection that he gets blamed for doing the same thing over again, (Vasari) ; but exquisite in sentiment and the conditions of taste which it forms, so as to become the master of it to Raphael and to all succeeding him ; and remaining such a type of sentiment, too delicate to be felt by the latter practical mind of Dutch-bred England, that Goldsmith makes the admiration of him the test of absurd connoisseurship. But yet, with under-current of intellect, which gets him accused of free-thinking, and therefore with under-current of entirely exquisite chiaroscuro.

Light and shade, then, imply the understanding of things—Colour, the imagination and the sentiment of them.

In Turner's distinctive work, colour is scarcely acknowledged unless under influences of sunshine. The sunshine is his treasure ; his lividest gloom contains it ; his greyest twilight regrets it, and remembers. Blue is always a blue shadow ; brown or gold, always light ;—nothing is cheerful but sunshine ; wherever the sun is not, there is melancholy or evil. Apollo is God ; and all forms of death and sorrow exist in opposition to him.

But in Perugino's distinctive work,—and therefore I have given him the captain's place over all,—there is simply *no* darkness, *no* wrong. Every colour is lovely, and every space is light. The world, the universe, is divine : all sadness is a part of harmony ; and all gloom, a part of peace.

THE OPENING
OF
THE CRYSTAL PALACE

*CONSIDERED IN SOME OF ITS RELATIONS
TO THE PROSPECTS OF ART*

BY

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THE OPENING OF THE CRYSTAL PALACE

CONSIDERED IN SOME OF ITS RELATIONS TO THE PROSPECTS OF ART.

I READ the account in the *Times* newspaper of the opening of the Crystal Palace at Sydenham, as I ascended the hill between Vevay and Chatel St. Denis, and the thoughts which it called up haunted me all day long, as my road wound among the grassy slopes of the Simmenthal. There was a strange contrast between the image of that mighty palace, raised so high above the hills on which it is built as to make them seem little else than a basement for its glittering stateliness, and those low larch huts, half hidden beneath their coverts of forest, and scattered like gray stones along the masses of far away mountain. Here, man contending with the power of Nature for his existence; there, commanding them for his recreation: here a feeble folk nested among the rocks with the wild goat and the coney, and retaining the same quiet thoughts from generation to generation; there, a great multitude triumphing in the splendour of immeasurable habitation, and haughty with hope of endless progress and irresistible power.

It is indeed impossible to limit, in imagination, the beneficent results which may follow from the undertaking thus happily begun. For the first time in the history of the world, a national museum is formed in which a whole nation is in-

terested ; formed on a scale which permits the exhibition of monuments of art in unbroken symmetry, and of the productions of nature in unthwarted growth,—formed under the auspices of science which can hardly err, and of wealth which can hardly be exhausted ; and placed in the close neighbourhood of a metropolis overflowing with a population weary of labour, yet thirsting for knowledge, where contemplation may be consistent with rest, and instruction with enjoyment. It is impossible, I repeat, to estimate the influence of such an institution on the minds of the working-classes. How many hours once wasted may now be profitably dedicated to pursuits in which interest was first awakened by some accidental display in the Norwood palace ; how many constitutions, almost broken, may be restored by the healthy temptation into the country air,—how many intellects, once dormant, may be roused into activity within the crystal walls, and how these noble results may go on multiplying and increasing and bearing fruit seventy times sevenfold, as the nation pursues its career,—are questions as full of hope as incapable of calculation. But with all these grounds for hope there are others for despondency, giving rise to a group of melancholy thoughts, of which I can neither repress the importunity nor forbear the expression.

For three hundred years, the art of architecture has been the subject of the most curious investigation ; its principles have been discussed with all earnestness and acuteness ; its models in all countries and of all ages have been examined with scrupulous care, and imitated with unsparing expenditure. And of all this refinement of enquiry,—this lofty search after the ideal,—this subtlety of investigation and sumptuousness of practice,—the great result, the admirable and long-expected conclusion is, that in the centre of the 19th century, we suppose ourselves to have invented a new style of architecture, when we have magnified a conservatory !

In Mr. Laing's speech, at the opening of the palace, he declares that "*an entirely novel order of architecture*, producing, by means of unrivalled mechanical ingenuity, the most marvellous and beautiful effects, sprang into existence to provide

a building.”* In these words, the speaker is not merely giving utterance to his own feelings. He is expressing the popular view of the facts, nor that a view merely popular, but one which has been encouraged by nearly all the professors of art of our time.

It is to this, then, that our Doric and Palladian pride is at last reduced! We have vaunted the divinity of the Greek ideal—we have plumed ourselves on the purity of our Italian taste—we have cast our whole souls into the proportions of pillars, and the relations of orders—and behold the end! Our taste, thus exalted and disciplined, is dazzled by the lustre of a few rows of panes of glass; and the first principles of architectural sublimity, so far sought, are found all the while to have consisted merely in sparkling and in space.

Let it not be thought that I would depreciate (were it possible to depreciate) the mechanical ingenuity which has been displayed in the erection of the Crystal Palace, or that I underrate the effect which its vastness may continue to produce on the popular imagination. But mechanical ingenuity is *not* the essence either of painting or architecture: and largeness of dimension does not necessarily involve nobleness of design. There is assuredly as much ingenuity required to build a screw frigate, or a tubular bridge, as a hall of glass;—all these are works characteristic of the age; and all, in their several ways, deserve our highest admiration; but not admiration of the kind that is rendered to poetry or to art. We may cover the German Ocean with frigates, and bridge the Bristol Channel with iron, and roof the county of Middlesex with crystal, and yet not possess one Milton, or Michael Angelo.

Well, it may be replied, we need our bridges, and have pleasure in our palaces; but we do not want Miltons, nor Michael Angelos.

Truly, it seems so; for, in the year in which the first Crystal Palace was built, there died among us a man whose name, in after ages, will stand with those of the great of all time. Dying, he bequeathed to the nation the whole mass of his

* See the *Times* of Monday, June 12th.

most cherished works: and for these three years, while we have been building this colossal receptacle for casts and copies of the art of other nations, these works of our own greatest painter have been left to decay in a dark room near Cavendish Square, under the custody of an aged servant.

This is quite natural. But it is also memorable.

There is another interesting fact connected with the history of the Crystal Palace as it bears on that of the art of Europe, namely, that in the year 1851, when all that glittering roof was built, in order to exhibit the petty arts of our fashionable luxury—the carved bedsteads of Vienna, and glued toys of Switzerland, and gay jewellery of France—in that very year, I say, the greatest pictures of the Venetian masters were rotting at Venice in the rain, for want of roof to cover them, with holes made by cannon shot through their canvas.

There is another fact, however, more curious than either of these, which will hereafter be connected with the history of the palace now in building; namely, that at the very period when Europe is congratulated on the invention of a new style of architecture, because fourteen acres of ground have been covered with glass, the greatest examples in existence of true and noble Christian architecture were being resolutely destroyed; and destroyed by the effects of the very interest which was slowly beginning to be excited by them.

Under the firm and wise government of the third Napoleon, France has entered on a new epoch of prosperity, one of the signs of which is a zealous care for the preservation of her noble public buildings. Under the influence of this healthy impulse, repairs of the most extensive kind are at this moment proceeding, on the cathedrals of Rheims, Amiens, Rouen, Chartres, and Paris (probably also in many other instances unknown to me). These repairs were, in many cases, necessary up to a certain point; and they have been executed by architects as skilful and learned as at present exist,—executed with noble disregard of expense, and sincere desire on the part of their superintendents that they should be completed in a manner honourable to the country.

They are nevertheless more fatal to the monuments they

are intended to preserve, than fire, war, or revolution. For they are undertaken, in the plurality of instances, under an impression, which the efforts of all true antiquaries have as yet been unable to remove, that it is possible to reproduce the mutilated sculpture of past ages in its original beauty.

“Reproduire avec une exactitude mathématique,” are the words used, by one of the most intelligent writers on this subject,* of the proposed regeneration of the statue of Ste. Modeste, on the north porch of the Cathedral of Chartres.

Now, it is not the question at present, whether 13th century sculpture be of value, or not. Its value is assumed by the authorities who have devoted sums so large to its so-called restoration, and may therefore be assumed in my argument. The worst state of the sculptures whose restoration is demanded may be fairly represented by that of the celebrated group of the Fates, among the Elgin Marbles in the British Museum. With what favour would the guardians of those marbles, or any other persons interested in Greek art, receive a proposal from a living sculptor to “reproduce with mathematical exactitude” the group of the Fates, in a perfect form, and to destroy the original? For with exactly such favour, those who are interested in Gothic art should receive proposals to reproduce the sculpture of Chartres or Rouen.

In like manner, the state of the architecture which it is proposed to restore, may, at its worst, be fairly represented to the British public by that of the best preserved portions of Melrose Abbey. With what encouragement would those among us who are sincerely interested in history, or in art, receive a proposal to pull down Melrose Abbey, and “reproduce it mathematically?” There can be no doubt of the answer which, in the instances supposed, it would be proper to return. “By all means, if you can, reproduce mathematically, elsewhere, the group of the Fates, and the Abbey of Melrose. But leave unharmed the original fragment, and the existing ruin.” And an answer of the same tenour ought to be given to every proposal to restore a Gothic sculpture or building.

* M. l'Abbé Bulteau, *Description de la Cathédrale de Chartres*, (8vo. Paris, Sagnier et Bray, 1850), p. 98, *note*.

Carve or raise a model of it in some other part of the city: but touch not the actual edifice, except only so far as may be necessary to sustain, to protect it. I said above that repairs were in many instances necessary. These necessary operations consist in substituting new stones for decayed ones, where they are absolutely essential to the stability of the fabric; in propping, with wood or metal, the portions likely to give way; in binding or cementing into their places the sculptures which are ready to detach themselves; and in general care to remove luxuriant weeds, and obstructions of the channels for the discharge of the rain. But no modern or imitative sculpture ought *ever*, under any circumstances, to be mingled with the ancient work.

Unfortunately, repairs thus conscientiously executed are always unsightly, and meet with little approbation from the general public; so that a strong temptation is necessarily felt by all superintendents of public works, to execute the required repairs in a manner which, though indeed fatal to the monument, may be, in appearance, seemly. But a far more cruel temptation is held out to the architect. He who should propose to a municipal body, to build in the form of a new church, to be erected in some other part of their city, models of such portions of their cathedral as were falling into decay, would be looked upon as merely asking for employment, and his offer would be rejected with disdain. But let an architect declare that the existing fabric stands in need of repairs, and offer to restore it to its original beauty, and he is instantly regarded as a lover of his country, and has a chance of obtaining a commission which will furnish him with a large and steady income, and enormous patronage, for twenty or thirty years to come.

I have great respect for human nature. But I would rather leave it to others than myself to pronounce how far such a temptation is always likely to be resisted, and how far, when repairs are once permitted to be undertaken, a fabric is likely to be spared from mere interest in its beauty, when its destruction, under the name of restoration, has become permanently remunerative to a large body of workmen.

Let us assume, however, that the architect is always conscientious—always willing, the moment he has done what is strictly necessary for the safety and decorous aspect of the building, to abandon his income, and declare his farther services unnecessary. Let us presume, also, that every one of the two or three hundred workmen who must be employed under him, is equally conscientious, and, during the course of years of labour, will never destroy in carelessness what it may be inconvenient to save, or in cunning, what it is difficult to imitate. Will all this probity of purpose preserve the hand from error, and the heart from weariness? Will it give dexterity to the awkward—sagacity to the dull—and at once invest two or three hundred imperfectly educated men with the feeling, intention, and information, of the freemasons of the 13th century? Grant that it can do all this, and that the new building is both equal to the old in beauty, and precisely correspondent to it in detail. Is it, therefore, altogether *worth* the old building? Is the stone carved to-day in their masons' yards altogether the same in value to the hearts of the French people as that which the eyes of St. Louis saw lifted to its place? Would a loving daughter, in mere desire for gaudy dress, ask a jeweller for a bright facsimile of the worn cross which her mother bequeathed to her on her death-bed?—would a thoughtful nation, in mere fondness for splendour of streets, ask its architects to provide for it facsimiles of the temples which for centuries had given joy to its saints, comfort to its mourners, and strength to its chivalry?

But it may be replied, that all this is already admitted by the antiquaries of France and England; and that it is impossible that works so important should now be undertaken without due consideration and faithful superintendence.

I answer, that the men who justly feel these truths are rarely those who have much influence in public affairs. It is the poor abbé, whose little garden is sheltered by the mighty buttresses from the north wind, who knows the worth of the cathedral. It is the bustling mayor and the prosperous architect who determine its fate,

I answer farther, by the statement of a simple fact. I have

given many years, in many cities, to the study of Gothic architecture ; and of all that I know, or knew, the entrance to the north transept of Rouen Cathedral was, on the whole, the most beautiful—beautiful, not only as an elaborate and faultless work of the finest time of Gothic art, but yet more beautiful in the partial, though not dangerous, decay which had touched its pinnacles with pensive colouring, and softened its severer lines with unexpected change, and delicate fracture, like sweet breaks in a distant music. The upper part of it has been already restored to the white accuracies of novelty ; the lower pinnacles, which flanked its approach, far more exquisite in their partial ruin than the loveliest remains of our English abbeys, have been entirely destroyed, and rebuilt in rough blocks, now in process of sculpture. This restoration, so far as it has gone, has been executed by peculiarly skilful workmen ; it is an unusually favorable example of restoration, especially in the care which has been taken to preserve intact the exquisite, and hitherto almost uninjured sculptures which fill the quatrefoils of the tracery above the arch. But I happened myself to have made, five years ago, detailed drawings of the buttress decorations on the right and left of this tracery, which are part of the work that has been completely restored. And I found the restorations as inaccurate as they were unnecessary.

If this is the case in a most favourable instance, in that of a well-known monument, highly esteemed by every antiquary in France, what, during the progress of the now almost universal repairs, is likely to become of architecture which is unwatched and despised ?

Despised ! and more than despised—even hated ! It is a sad truth, that there is something in the solemn aspect of ancient architecture which, in rebuking frivolity and chastening gaiety, has become at this time literally *repulsive* to a large majority of the population of Europe. Examine the direction which is taken by all the influences of fortune and of fancy, wherever they concern themselves with art, and it will be found that the real, earnest effort of the upper classes of European society is to make every place in the world as much

like the Champs Elysées of Paris as possible. Wherever the influence of that educated society is felt, the old buildings are relentlessly destroyed ; vast hotels, like barracks, and rows of high, square-windowed dwelling-houses, thrust themselves forward to conceal the hated antiquities of the great cities of France and Italy. Gay promenades, with fountains and statues, prolong themselves along the quays once dedicated to commerce ; ball-rooms and theatres rise upon the dust of desecrated chapels, and thrust into darkness the humility of domestic life. And when the formal street, in all its pride of perfumery and confectionery, has successfully consumed its way through the wrecks of historical monuments, and consummated its symmetry in the ruin of all that once prompted to reflection, or pleaded for regard, the whitened city is praised for its splendour, and the exulting inhabitants for their patriotism—patriotism which consists in insulting their fathers with forgetfulness, and surrounding their children with temptation.

I am far from intending my words to involve any disrespectful allusion to the very noble improvements in the city of Paris itself, lately carried out under the encouragement of the Emperor. Paris, in its own peculiar character of bright magnificence, had nothing to fear, and everything to gain, from the gorgeous prolongations of the Rue Rivoli. But I speak of the general influence of the rich travellers and proprietors of Europe on the cities which they pretend to admire, or endeavour to improve. I speak of the changes wrought during my own lifetime, on the cities of Venice, Florence, Geneva, Lucerne, and chief of all on Rouen : a city altogether inestimable for its retention of mediæval character in the infinitely varied streets in which one half of the existing and inhabited houses date from the 15th or early 16th century ; and the only town left in France in which the effect of old French domestic architecture can yet be seen in its collective groups. But when I was there, this last spring, I heard that these noble old Norman houses are all, as speedily as may be, to be stripped of the dark slates which protected their timbers, and deliberately whitewashed over all their sculptures and orna-

ments, in order to bring the interior of the town into some conformity with the "handsome fronts" of the hotels and offices on the quay.

Hotels and offices, and "handsome fronts" in general—they can be built in America or Australia—built at any moment, and in any height of splendour. But who shall give us back, when once destroyed, the habitations of the French chivalry and bourgeoisie, in the days of the Field of the Cloth of Gold?

It is strange that no one seems to think of this! What do men travel for, in this Europe of ours? Is it only to gamble with French dies—to drink coffee out of French porcelain—to dance to the beat of German drums, and sleep in the soft air of Italy? Are the ball-room, the billiard-room, and the Boulevard, the only attractions that win us into wandering, or tempt us to repose? And when the time is come, as come it will, and that shortly, when the parsimony—or lassitude—which, for the most part, are the only protectors of the remnants of elder time, shall be scattered by the advance of civilisation—when all the monuments, preserved only because it was too costly to destroy them, shall have been crushed by the energies of the new world, will the proud nations of the twentieth century, looking round on the plains of Europe, disencumbered of their memorial marbles,—will those nations indeed stand up with no other feeling than one of triumph, freed from the paralysis of precedent and the entanglement of memory, to thank us, the fathers of progress, that no saddening shadows can any more trouble the enjoyments of the future,—no moments of reflection retard its activities; and that the new-born population of a world without a record and without a ruin, may, in the fulness of ephemeral felicity, dispose itself to eat, and to drink, and to die?

Is this verily the end at which we aim, and will the mission of the age have been then only accomplished, when the last castle has fallen from our rocks, the last cloisters faded from our valleys, the last streets, in which the dead have dwelt, been effaced from our cities, and regenerated society is left in luxurious possession of towns composed only of bright saloons,

overlooking gay parterres? If this be indeed our end, yet why must it be so laboriously accomplished? Are there no new countries on the earth, as yet uncrowned by Thorns of cathedral spires, untormented by the consciousness of a past? Must this little Europe—this corner of our globe, gilded with the blood of old battles, and grey with the temples of old pieties—this narrow piece of the world's pavement, worn down by so many pilgrims' feet, be utterly swept and garnished for the masque of the Future? Is America not wide enough for the elasticities of our humanity? Asia not rich enough for its pride? or among the quiet meadow-lands and solitary hills of the old land, is there not yet room enough for the spreadings of power, or the indulgences of magnificence, without founding all glory upon ruin, and prefacing all progress with obliteration?

We must answer these questions speedily, or we answer them in vain. The peculiar character of the evil which is being wrought by this age is its utter irreparableness. Its newly formed schools of art, its extending galleries, and well-ordered museums will assuredly bear some fruit in time, and give once more to the popular mind the power to discern what is great, and the disposition to protect what is precious. But it will be too late. We shall wander through our palaces of crystal, gazing sadly on copies of pictures torn by cannon-shot, and on casts of sculpture dashed to pieces long ago. We shall gradually learn to distinguish originality and sincerity from the decrepitudes of imitation and palsies of repetition; but it will be only in hopelessness to recognise the truth, that architecture and painting can be "restored" when the dead can be raised,—and not till then.

Something might yet be done, if it were but possible thoroughly to awaken and alarm the men whose studies of archæology have enabled them to form an accurate judgment of the importance of the crisis. But it is one of the strange characters of the human mind, necessary indeed to its peace, but infinitely destructive of its power, that we never thoroughly feel the evils which are not actually set before our eyes. If, suddenly, in the midst of the enjoyments of the

palate and lightnesses of heart of a London dinner-party, the walls of the chamber were parted, and through their gap, the nearest human beings who were famishing, and in misery, were borne into the midst of the company—feasting and fancy-free—if, pale with sickness, horrible in destitution, broken by despair, body by body, they were laid upon the soft carpet, one beside the chair of every guest, would only the crumbs of the dainties be cast to them—would only a passing glance, a passing thought be vouchsafed to them? Yet the actual facts, the real relations of each Dives and Lazarus, are not altered by the intervention of the house wall between the table and the sick-bed—by the few feet of ground (how few!) which are indeed all that separate the merriment from the misery.

It is the same in the matters of which I have hitherto been speaking. If every one of us, who knows what food for the human heart there is in the great works of elder time, could indeed see with his own eyes their progressive ruin; if every earnest antiquarian, happy in his well-ordered library, and in the sense of having been useful in preserving an old stone or two out of his parish church, and an old coin or two out of a furrow in the next ploughed field, could indeed behold, each morning as he awaked, the mightiest works of departed nations mouldering to the ground in disregarded heaps; if he could always have in clear phantasm before his eyes the ignorant monk trampling on the manuscript, the village mason striking down the monument, the court painter daubing the despised and priceless masterpiece into freshness of fatuity, he would not always smile so complacently in the thoughts of the little learnings and petty preservations of his own immediate sphere. And if every man who has the interest of Art and of History at heart, would at once devote himself earnestly—not to enrich his own collection—not even to enlighten his own neighbours or investigate his own parish-territory—but to far-sighted and *fore-sighted* endeavour in the great field of Europe, there is yet time to do much. An association might be formed, thoroughly organised so as to maintain active watchers and agents in every town of importance, who, in the first place,

should furnish the society with a *perfect* account of every monument of interest in its neighbourhood, and then with a yearly or half-yearly report of the state of such monuments, and of the changes proposed to be made upon them ; the society then furnishing funds, either to buy, freehold, such buildings or other works of untransferable art as at any time might be offered for sale, or to assist their proprietors, whether private individuals or public bodies, in the maintenance of such guardianship as was really necessary for their safety ; and exerting itself, with all the influence which such an association would rapidly command, to prevent unwise restoration, and unnecessary destruction.

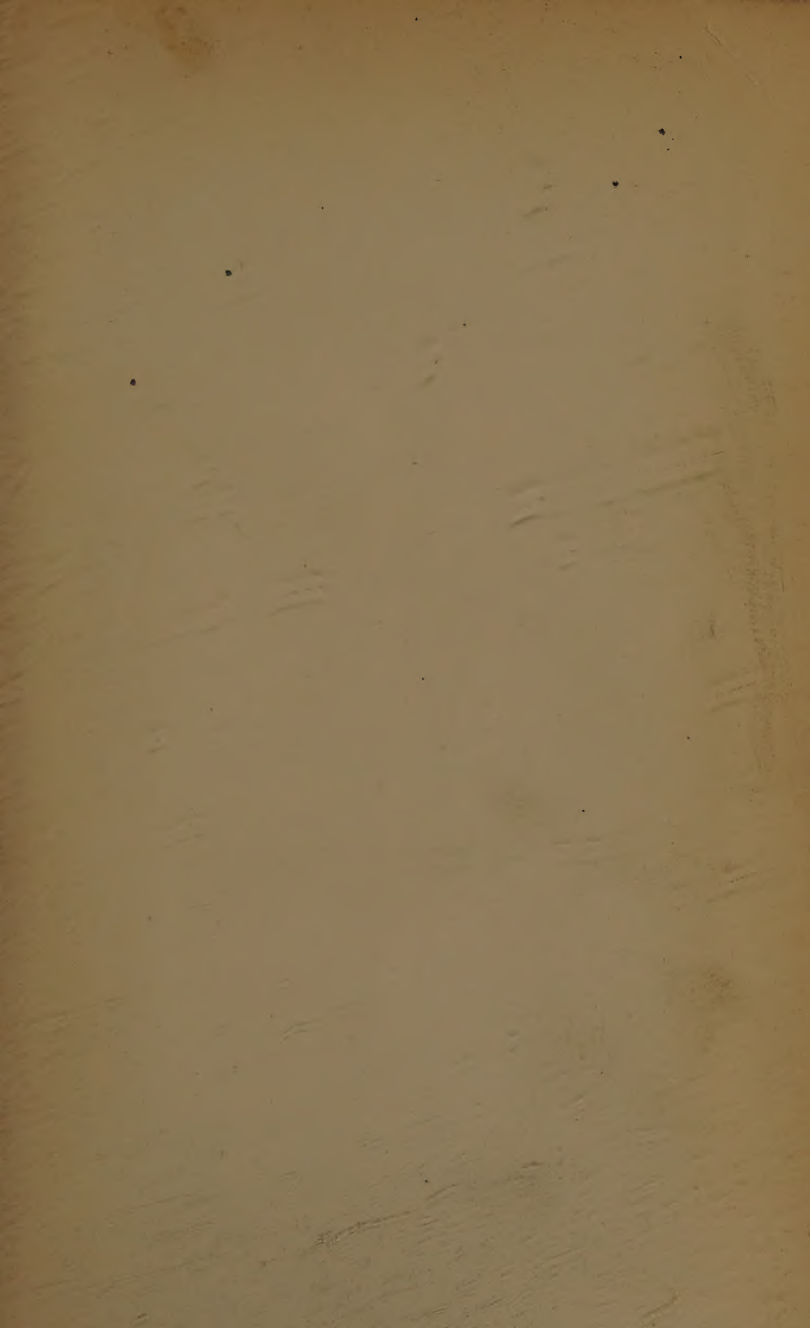
Such a society would of course be rewarded only by the consciousness of its usefulness. Its funds would have to be supplied, in pure self-denial, by its members, who would be required, so far as they assisted it, to give up the pleasure of purchasing prints or pictures for their own walls, that they might save pictures which in their lifetime they might never behold ;—they would have to forego the enlargement of their own estates, that they might buy, for a European property, ground on which their feet might never tread. But is it absurd to believe that men are capable of doing this? Is the love of art altogether a selfish principle in the heart? and are its emotions altogether incompatible with the exertions of self-denial, or enjoyments of generosity?

I make this appeal at the risk of incurring only contempt for my Utopianism. But I should forever reproach myself if I were prevented from making it by such a risk ; and I pray those who may be disposed in anywise to favour it, to remember that it must be answered at once or never. The next five years determine what is to be saved—what destroyed. The restorations have actually begun like cancers on every important piece of Gothic architecture in Christendom ; the question is only how much can yet be saved. All projects, all pursuits, having reference to art, are at this moment of less importance than those which are simply protective. There is time enough for everything else. Time enough for teaching—time enough for criticising—time enough for inventing. But time little

enough for saving. Hereafter we can create, but it is now only that we can preserve. By the exertion of great national powers, and under the guidance of enlightened monarchs, we may raise magnificent temples and gorgeous cities ; we may furnish labour for the idle, and interest for the ignorant. But the power neither of emperors, nor queens, nor kingdoms, can ever print again upon the sands of time the effaced footsteps of departed generations, or gather together from the dust the stones which had been stamped with the spirit of our ancestors.

THE END.

Holy Ghost College
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